ISBN 0-7729-0507-X
ISSN 0824-880X

ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

JANUARY 4, 1983 - JANUARY 3, 1984

Atmospheric Processes Studies Unit
Air Quality and Meteorology Section
Ontario Ministry of the Environment
Air Resources Branch
880 Bay Street, 4th Floor
Toronto, Ontario
Canada, M5S 1Z8

May 1985

ARB-088-85-AQM
API-017/85

A.P.I.O.S. Coordination Office
Ontario Ministry of the Environment
6th Floor, 40 St. Clair Avenue West
Toronto, Ontario
Canada, M4V 1P5
Project Co-ordinator: Dr. T. Brydges

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ACKNOWLEDGEMENTS

This report was prepared by David Chung of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Steve Elliott (in Southwestern Region), David Allcock (in Southeastern Reigon), Wim Smits (in Northwestern Region), Chris Hutt (in Northeast Region), and J.P. Varto (in Central Region). Sample handling was carried out by Dan Orr and Scott Kennedy, and overall network coordination by Bill Bardswick, of the Air Resources Branch. Chemical Analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini and Barry Loescher. All enquiries regarding the reported data should be directed to Walter Chan, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 965-1634.

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PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from January 3, 1983 to January 4, 1984. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U").

The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document[1].

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

All analytical results presented in this report were blank corrected. Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including $SO_4^=$, NO_3^- and some trace metals. The nylon filter is analysed for gaseous HNO_3 and the Whatman 41 filter (impregnated with K_2CO_3 - glycerol) is analysed for

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1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

gaseous SO_2. The reported parameter "TOTL NO3" represents total nitrates and is calculated by the summation of $N\text{-}HNO_3$ and $N\text{-}NO_3$. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. If a detection limit is encountered in the calculation of "TOTL NO3" then a value corresponding to one half the detection limit is utilized. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

Field Comment Code Index

A - Sampler malfunction
B - Hydro failure (known/suspected)
C - Flow volume suspect
D - Contamination (known/suspected)
E - Filter placement incorrect
F - Sample not submitted
Q - Other

Office Comment Code Index

F - Data invalidated - if the daily average flow volume is outside the range of (2880 $\pm$ 50%) litres per day.
Z - Abnormal sampling period.

Result Remark Code Index

> - actual result greater than value reported
< - actual result less than value reported
< T - actual result less than criterion of detection
< W - no response, minimum possible result reported
A - approximate value
U - unreliable result
D - outlier of Dixon Ratio Test

PART II

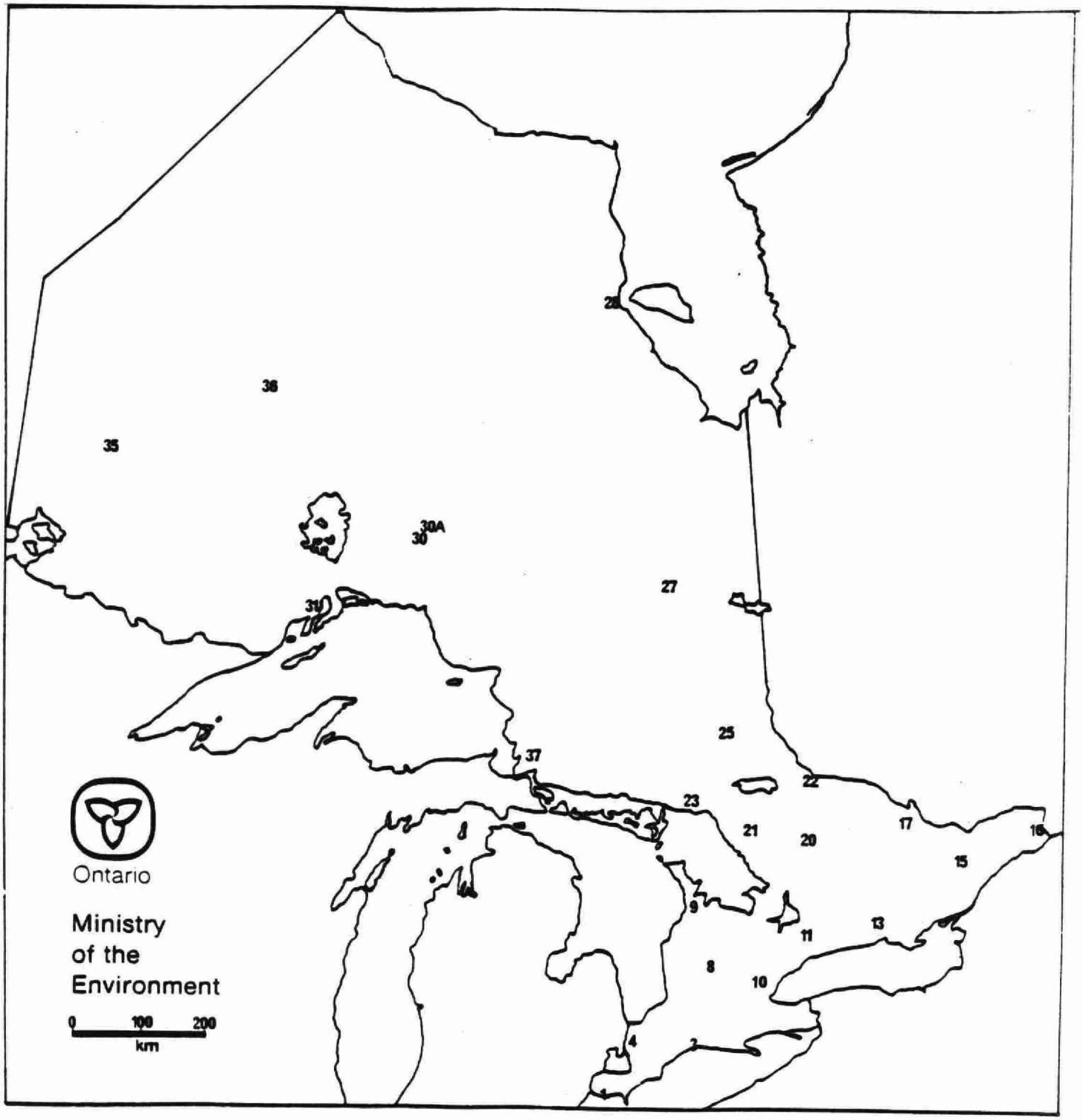
STATION DESCRIPTION AND LOCATION MAP

APIOS CUMULATIVE DRY DEPOSITION NETWORK SITE DESCRIPTIONS

MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM GRID CO-ORDINANTS (Northing)	(Easting)
Southwestern	Colchester	183	41°59'15"	82°55'41"	4650000	340300
	Pt. Stanley	213	42°40'22"	81°09'55"	4724050	486700
	Wilkesport	183	42°42'11"	82°21'13"	4728350	389150
	Shallow Lake	229	44°34'54"	81°05'24"	4936200	492850
	Palmerston	389	43°48'19"	80°54'12"	4850050	507750
Central	Dorset	320	45°13'26"	78°55'52"	5009650	662400
	Milton	221	43°31'05"	79°55'54"	4818600	586350
	Uxbridge	244	44°12'46"	79°12'38"	4896800	643000
	Campbellford	175	44°17'28"	77°47'33"	4907600	277150
Southeastern	Smith's Falls	122	44°56'41"	75°57'48"	4977100	423950
	Dalhousie Mills	69	45°19'00"	74°28'13"	5018100	541550
	Golden Lake	160	45°36'48"	77°12'03"	5053200	328400
Northeastern	McKellar	244	45°30'57"	79°55'19"	5040600	583950
	Killarney	183	45°59'26"	81°29'18"	5092900	462200
	Mattawa	198	46°16'45"	78°49'19"	5127150	667800
	Gowganda	343	47°39'04"	80°46'32"	5277300	516600
	Moonbeam	244	49°19'16"	82°08'46"	5463600	416650
	Turkey Lake	472	47°03'15"	84°24'00"	5214250	696750
	Attawapiskat	9	52°56'00"	82°24'00"	NA	NA
Northwestern	Dorion	244	48°50'33"	88°36'45"	5410800	382150
	Nakina	320	50°10'38"	86°42'40"	5558150	520950
	Geraldton	351	49°48'05"	86°46'00"	5516300	516750
	Ear Falls	350	50°38'31"	93°13'13"	5609800	484150
	Pickle Lake	360	51°27'41"	90°12'04"	5704800	694550

FIGURE 1

LOCATION OF APIOS CUMULATIVE AMBIENT AIR MONITORING NETWORK SITES



1. Colchester
3. Pt. Stanley
4. Wilkesport
8. Palmerston
9. Shallow Lake
10. Milton
11. Uxbridge
13. Campbellford
15. Smith's Falls
16. Dalhousie
17. Golden Lake
20. Dorset
21. Mckellar
22. Mattawa
23. Killarney
25. Gowganda
27. Moonbeam
28. Attawapiskat
30. Geraldton (Replacing Nakina, August 1983)
30A. Nakina
31. Dorion
35. Ear Falls
36. Pickle Lake
37. Turkey Lake

PART III

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-HOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 2,83	JAN 4,83	800	820	81310.0	99105	2	1		
MAR 1,83	FEB 7,83	1300	830	63210.0	99112	2	1		Z
MAR 29,83	MAR 1,83	830	745	83210.0	99118	2	1		
APR 26,83	MAR 29,83	745	750	80880.0	99124	2	1		
MAY 24,83	APR 26,83	750	800	80240.0	99130	2	1		
JUN 21,83	MAY 24,83	800	740	79100.0	99135	2	1		
JUL 19,83	JUN 21,83	740	805	76200.0	99144	2	1		
AUG 16,83	JUL 19,83	805	745	77120.0	99149	2	1		
SEP 13,83	AUG 16,83	820	748	78040.0	99158	2	1		
OCT 11,83	SEP 13,83	752	810	76890.0	99163	2	1		
NOV 8,83	OCT 11,83	810	820	78840.0	99164	2	1		
DEC 6,83	NOV 8,83	820	852	77130.0	99170	2	1		
JAN 3,84	DEC 6,83	852	820	67830.0	99176	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3		SULPHATE UG/M**3		TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3		POTASSIM UG/M**3
FEB 2,83	JAN 4,83	14.51		4.92		1.021	0.750	0.585	0.148		0.089
MAR 1,83	FEB 7,83	22.89		7.83		1.838	0.791	0.566	0.150		0.119
MAR 29,83	MAR 1,83	12.10		5.02		1.171	0.703	0.538	0.144		0.078
APR 26,83	MAR 29,83	13.60		4.14		0.794	0.507	0.575	0.158		0.064
MAY 24,83	APR 26,83	11.80		1.25		0.349	0.081	0.343	0.135		0.020
JUN 21,83	MAY 24,83	12.64		9.67		1.578	0.493	0.865	0.247		0.069
JUL 19,83	JUN 21,83	10.50		10.17		1.332	0.545	1.054	0.308		0.108
AUG 16,83	JUL 19,83	9.08		8.23		1.161	0.499	0.890	0.275		0.100
SEP 13,83	AUG 16,83	15.47		> 6.41		1.572	0.615	0.554	0.181	D	0.080
OCT 11,83	SEP 13,83	8.41		6.44		0.986	0.468	0.748	0.206		0.078
NOV 8,83	OCT 11,83	12.77		3.99		1.065	0.825	0.610	0.143		0.108
DEC 6,83	NOV 8,83	13.58		******		******	******	0.430	0.121		0.078
JAN 3,84	DEC 6,83	33.66		4.46		1.179	0.907	0.364	0.114		0.100

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 2,83	JAN 4,83	0.323	D 0.075	0.037	0.080	0.0047	0.0016	< 0.00061
MAR 1,83	FEB 7,83	0.261	0.152	0.084	0.110	0.0021	0.0028	< 0.00079
MAR 29,83	MAR 1,83	0.246	0.159	0.079	0.099	0.0096	D 0.0030	0.00156
APR 26,83	MAR 29,83	0.141	0.098	0.049	0.083	0.0093	0.0025	< 0.00062
MAY 24,83	APR 26,83	D 0.034	0.119	0.095	0.039	0.0075	0.0029	< 0.00062
JUN 21,83	MAY 24,83	0.111	0.144	0.099	0.087	0.0120	0.0025	< 0.00063
JUL 19,83	JUN 21,83	0.117	0.131	0.159	0.098	0.0125	0.0046	0.00328
AUG 16,83	JUL 19,83	0.114	0.117	0.071	0.112	0.0104	0.0045	0.00169
SEP 13,83	AUG 16,83	0.143	0.118	0.082	0.085	0.0072	0.0032	< 0.00064
OCT 11,83	SEP 13,83	0.110	0.109	0.072	0.055	0.0098	0.0017	< 0.00065
NOV 8,83	OCT 11,83	0.146	0.096	0.048	0.095	0.0108	0.0016	< 0.00063
DEC 6,83	NOV 8,83	0.143	0.080	0.049	0.076	0.0084	0.0026	< 0.00065
JAN 3,84	DEC 6,83	0.273	0.069	0.054	0.055	0.0066	D 0.0066	< 0.00074

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 2,83	JAN 4,83	< 0.0012	0.044	0.00021
MAR 1,83	FEB 7,83	< 0.0016	0.070	< 0.00008
MAR 29,83	MAR 1,83	0.0018	0.054	0.00060
APR 26,83	MAR 29,83	< 0.0012	0.046	U 0.00717
MAY 24,83	APR 26,83	< 0.0012	0.019	0.00027
JUN 21,83	MAY 24,83	< 0.0013	0.039	0.00061
JUL 19,83	JUN 21,83	< 0.0013	0.035	0.00085
AUG 16,83	JUL 19,83	< 0.0013	0.041	0.00062
SEP 13,83	AUG 16,83	< 0.0013	0.021	0.00029
OCT 11,83	SEP 13,83	< 0.0013	0.034	0.00036
NOV 8,83	OCT 11,83	0.0025	0.062	0.00082
DEC 6,83	NOV 8,83	< 0.0013	0.063	0.00117
JAN 3,84	DEC 6,83	< 0.0015	0.037	0.00047

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL #8 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1300	1300	78280.0	99109	2	1		
MAR 1,83	FEB 1,83	1300	1230	67280.0	99116	2	1	A	
MAR 29,83	MAR 1,83	1300	1300	68540.0	99122	2	1		
APR 26,83	MAR 29,83	1300	1300	77160.0	99128	2	1		
MAY 30,83	APR 26,83	1300	1300	77690.0	99134	2	1	C	Z
JUN 21,83	MAY 30,83	1300	1300	58940.0	99139	2	1		Z
JUL 19,83	JUN 21,83	1300	1500	77210.0	99148	2	1		
AUG 18,83	JUL 19,83	1500	1100	82980.0	99153	2	1	Q	Z
SEP 13,83	AUG 18,83	1100	1300	69990.0	99154	2	1		Z
OCT 11,83	SEP 13,83	1300	1300	71830.0	99159	2	1		
NOV 8,83	OCT 11,83	1300	1400	75450.0	99169	2	1		
DEC 6,83	NOV 8,83	1400	1215	76270.0	99175	2	1		
JAN 11,84	DEC 6,83	1215	1000	58550.0	99181	2	1	B	Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	12.77	4.98	1.012	0.549	0.676	D 0.252	0.054
MAR 1,83	FEB 1,83	10.91	6.09	1.293	0.528	0.832	0.276	0.052
MAR 29,83	MAR 1,83	3.25	4.23	0.981	0.372	0.387	0.136	0.044
APR 26,83	MAR 29,83	4.28	3.37	0.502	0.227	0.417	0.145	0.036
MAY 30,83	APR 26,83	2.66	2.68	0.563	0.225	0.592	0.207	0.028
JUN 21,83	MAY 30,83	4.63	8.69	1.361	0.407	1.218	0.397	0.093
JUL 19,83	JUN 21,83	3.46	5.87	0.784	0.376	1.172	0.438	0.097
AUG 18,83	JUL 19,83	3.37	8.62	0.660	0.374	1.041	0.383	0.074
SEP 13,83	AUG 18,83	4.19	7.79	0.822	0.436	0.930	0.337	0.075
OCT 11,83	SEP 13,83	3.06	5.36	0.961	0.459	0.640	0.187	0.077
NOV 8,83	OCT 11,83	D 5.17	2.72	0.875	D 0.325	0.533	0.125	0.060
DEC 6,83	NOV 8,83	8.31	******	******	******	0.367	D 0.094	0.049
JAN 11,84	DEC 6,83	18.67	3.54	0.918	0.547	0.140	0.052	0.056

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL #8

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.202	0.038	0.027	0.060	0.0036	0.0010	< 0.00064
MAR 1,83	FEB 1,83	0.201	0.088	0.015	0.065	0.0042	0.0027	0.00193
MAR 29,83	MAR 1,83	U 0.382	0.106	0.058	0.070	0.0066	0.0019	0.00190
APR 26,83	MAR 29,83	0.098	0.051	0.018	0.040	0.0036	0.0026	< 0.00065
MAY 30,83	APR 26,83	0.072	0.055	0.061	0.023	0.0058	0.0017	< 0.00064
JUN 21,83	MAY 30,83	0.106	0.085	0.146	0.077	0.0136	0.0025	< 0.00085
JUL 19,83	JUN 21,83	0.061	0.102	0.114	0.040	0.0097	0.0026	0.00104
AUG 18,83	JUL 19,83	0.055	0.046	0.088	0.055	0.0078	0.0030	0.00096
SEP 13,83	AUG 18,83	0.071	D 0.083	0.056	0.056	0.0071	0.0021	< 0.00071
OCT 11,83	SEP 13,83	0.090	0.077	0.049	0.041	0.0070	0.0018	< 0.00070
NOV 8,83	OCT 11,83	0.106	0.062	0.037	0.064	0.0053	0.0011	< 0.00066
DEC 6,83	NOV 8,83	0.118	0.061	0.035	0.045	0.0052	0.0026	0.00105
JAN 11,84	DEC 6,83	0.205	0.032	0.025	0.043	0.0026	0.0017	< 0.00085

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0013	0.022	0.00022
MAR 1,83	FEB 1,83	< 0.0015	0.025	0.00040
MAR 29,83	MAR 1,83	< 0.0015	0.020	0.00026
APR 26,83	MAR 29,83	< 0.0013	0.013	0.00023
MAY 30,83	APR 26,83	< 0.0013	0.013	< 0.00006
JUN 21,83	MAY 30,83	< 0.0017	0.021	0.00037
JUL 19,83	JUN 21,83	< 0.0013	0.014	0.00032
AUG 18,83	JUL 19,83	< 0.0012	0.015	0.00034
SEP 13,83	AUG 18,83	< 0.0014	0.016	< 0.00007
OCT 11,83	SEP 13,83	< 0.0014	0.022	0.00025
NOV 8,83	OCT 11,83	0.0020	0.024	0.00042
DEC 6,83	NOV 8,83	< 0.0013	0.028	0.00052
JAN 11,84	DEC 6,83	< 0.0017	0.018	0.00034

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1100	900	77990.0	99106	2	1		
MAR 1,83	FEB 1,83	900	900	80350.0	99113	2	1		
MAR 29,83	MAR 1,83	1030	900	85650.0	99119	2	1		
APR 26,83	MAR 29,83	1030	900	79620.0	99125	2	1		
MAY 24,83	APR 26,83	900	900	60650.0	99131	2	1		
JUN 21,83	MAY 24,83	900	900	75340.0	99136	2	1		
JUL 19,83	JUN 21,83	900	1400	76620.0	99145	2	1		
AUG 16,83	JUL 19,83	1400	900	65080.0	99150	2	1	B	
SEP 13,83	AUG 17,83	900	900	74750.0	99157	2	1		
OCT 11,83	SEP 13,83	900	900	74670.0	99162	2	1		
NOV 8,83	OCT 11,83	900	900	80910.0	99165	2	1		
DEC 6,83	NOV 8,83	900	930	66434.0	99171	2	1	B	
JAN 3,84	DEC 6,83	930	1330	77848.0	99177	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3		SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3		POTASSIM UG/M**3
FEB 1,83	JAN 4,83	20.69		4.72	1.010	0.641	0.405	0.072		0.067
MAR 1,83	FEB 1,83	13.62		5.79	1.478	0.610	0.439	0.073		0.084
MAR 29,83	MAR 1,83	10.74		4.41	0.981	0.479	0.451	0.079		0.058
APR 26,83	MAR 29,83	9.22		3.62	0.710	0.327	0.525	0.105		0.051
MAY 24,83	APR 26,83	10.34		5.36	1.121	0.486	0.999	0.213		0.096
JUN 21,83	MAY 24,83	7.66		9.16	1.364	0.378	0.701	0.139		0.074
JUL 19,83	JUN 21,83	5.87		7.86	1.066	0.483	0.911	0.172		0.108
AUG 16,83	JUL 19,83	4.15		7.19	0.745	0.438	0.527	0.103		0.087
SEP 13,83	AUG 17,83	4.78	>	6.69	1.086	0.542	0.748	0.143		0.104
OCT 11,83	SEP 13,83	9.91		6.03	1.011	0.429	0.696	0.128	D	0.087
NOV 8,83	OCT 11,83	8.49		3.19	0.819	0.365	0.580	0.094		0.083
DEC 6,83	NOV 8,83	11.45		******	******	******	0.288	0.054		0.064
JAN 3,84	DEC 6,83	24.32		4.14	1.140	0.655	0.384	0.087		0.100

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.235	0.061	0.028	0.066	0.0094	0.0010	< 0.00064
MAR 1,83	FEB 1,83	0.205	0.108	0.055	0.071	0.0072	0.0016	< 0.00062
MAR 29,83	MAR 1,83	0.245	0.152	0.090	0.064	0.0099	0.0021	0.00152
APR 26,83	MAR 29,83	0.092	0.128	0.064	0.063	0.0094	0.0016	< 0.00063
MAY 24,83	APR 26,83	0.129	0.231	0.104	0.063	0.0157	0.0021	0.00214
JUN 21,83	MAY 24,83	0.101	0.150	0.101	0.064	0.0126	0.0027	< 0.00066
JUL 19,83	JUN 21,83	0.071	0.100	0.153	0.057	0.0124	0.0039	< 0.00065
AUG 16,83	JUL 19,83	0.068	0.064	0.083	0.079	0.0085	0.0038	< 0.00077
SEP 13,83	AUG 17,83	0.077	0.116	0.072	0.067	0.0100	0.0027	< 0.00067
OCT 11,83	SEP 13,83	0.107	0.107	0.067	0.052	0.0114	0.0017	< 0.00067
NOV 8,83	OCT 11,83	0.117	0.098	0.065	0.066	0.0093	D 0.0010	< 0.00062
DEC 6,83	NOV 8,83	0.111	0.084	0.047	0.059	0.0075	0.0027	< 0.00075
JAN 3,84	DEC 6,83	0.238	0.121	D 0.149	0.040	0.0103	0.0019	< 0.00064

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0013	0.032	0.00054
MAR 1,83	FEB 1,83	< 0.0012	0.032	0.00050
MAR 29,83	MAR 1,83	< 0.0012	0.026	0.00026
APR 26,83	MAR 29,83	< 0.0013	0.016	0.00023
MAY 24,83	APR 26,83	< 0.0016	0.028	0.00046
JUN 21,83	MAY 24,83	< 0.0013	0.030	0.00050
JUL 19,83	JUN 21,83	< 0.0013	0.027	0.00029
AUG 16,83	JUL 19,83	< 0.0015	0.025	0.00069
SEP 13,83	AUG 17,83	< 0.0013	0.029	0.00037
OCT 11,83	SEP 13,83	0.0027	0.031	0.00038
NOV 8,83	OCT 11,83	< 0.0012	0.024	0.00047
DEC 6,83	NOV 8,83	< 0.0015	0.032	0.00072
JAN 3,84	DEC 6,83	< 0.0013	0.026	0.00041

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL #9

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 31,83	JAN 4,83	1610	830	79940.0	99108	2	1		
MAR 1,83	JAN 31,83	1610	900	84160.0	99115	2	1	D	
MAR 29,83	MAR 1,83	1030	900	80530.0	99121	2	1		
MAY 1,83	MAR 29,83	1030	730	95210.0	99127	2	1		Z
MAY 24,83	MAY 1,83	730	900	49980.0	99133	2	1		Z
JUN 21,83	MAY 24,83	900	845	82760.0	99138	2	1		
JUL 19,83	JUN 21,83	845	900	73790.0	99147	2	1		
AUG 16,83	JUL 19,83	900	745	73870.0	99152	2	1	B	
SEP 13,83	AUG 16,83	900	900	72210.0	99155	2	1		
OCT 11,83	SEP 13,83	900	900	72190.0	99160	2	1		
NOV 8,83	OCT 11,83	900	845	74600.0	99168	2	1		
DEC 6,83	NOV 8,83	845	915	78364.0	99174	2	1		
JAN 3,84	DEC 6,83	915	830	81789.0	99180	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 31,83	JAN 4,83	12.43	3.75	0.847	0.319	0.178	0.043	0.050
MAR 1,83	JAN 31,83	5.04	4.67	1.010	0.350	D 0.304	0.059	0.056
MAR 29,83	MAR 1,83	3.32	3.45	0.658	0.273	0.189	< 0.031	0.037
MAY 1,83	MAR 29,83	4.38	2.33	0.315	0.142	0.296	0.085	0.035
MAY 24,83	MAY 1,83	3.74	3.80	0.590	0.270	0.596	0.171	0.050
JUN 21,83	MAY 24,83	3.26	6.83	0.725	0.278	0.440	0.120	0.045
JUL 19,83	JUN 21,83	3.62	5.90	0.599	0.420	0.781	0.217	0.117
AUG 16,83	JUL 19,83	2.57	4.87	0.359	0.284	0.525	0.168	0.068
SEP 13,83	AUG 16,83	4.85	8.59	0.695	0.464	0.626	0.186	0.076
OCT 11,83	SEP 13,83	2.63	4.85	0.544	0.249	0.414	0.102	0.066
NOV 8,83	OCT 11,83	2.01	2.28	0.660	0.215	0.361	0.070	0.054
DEC 6,83	NOV 8,83	5.19	******	******	******	D 0.100	0.028	0.048
JAN 3,84	DEC 6,83	16.91	2.75	0.636	0.342	0.061	0.028	0.049

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL #9

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 31,83	JAN 4,83	0.154	0.042	0.019	0.062	0.0035	< 0.0006	< 0.00063
MAR 1,83	JAN 31,83	U 0.517	0.041	0.031	0.055	0.0069	0.0015	< 0.00059
MAR 29,83	MAR 1,83	0.176	0.075	0.044	0.041	0.0043	0.0016	< 0.00062
MAY 1,83	MAR 29,83	0.079	0.070	0.066	0.017	0.0035	0.0021	< 0.00053
MAY 24,83	MAY 1,83	0.121	0.100	0.043	0.032	0.0070	0.0016	< 0.00100
JUN 21,83	MAY 24,83	0.074	0.057	0.067	0.033	0.0066	0.0024	0.00218
JUL 19,83	JUN 21,83	U 0.255	0.066	0.119	0.037	0.0102	0.0024	< 0.00068
AUG 16,83	JUL 19,83	0.048	0.062	0.057	0.043	0.0047	0.0024	0.00108
SEP 13,83	AUG 16,83	0.069	0.094	0.062	0.038	0.0069	0.0021	< 0.00069
OCT 11,83	SEP 13,83	0.087	0.056	0.034	0.033	D 0.0048	0.0014	0.00457
NOV 8,83	OCT 11,83	0.104	0.046	0.028	0.036	0.0040	< 0.0007	< 0.00067
DEC 6,83	NOV 8,83	0.096	0.041	0.017	0.045	0.0023	0.0010	< 0.00064
JAN 3,84	DEC 6,83	0.165	0.023	0.017	0.025	0.0016	0.0016	< 0.00061

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 31,83	JAN 4,83	< 0.0013	0.017	0.00025
MAR 1,83	JAN 31,83	< 0.0012	0.024	0.00032
MAR 29,83	MAR 1,83	< 0.0012	0.013	0.00022
MAY 1,83	MAR 29,83	< 0.0011	0.008	D 0.00019
MAY 24,83	MAY 1,83	< 0.0020	0.012	U 0.00360
JUN 21,83	MAY 24,83	< 0.0012	0.013	0.00034
JUL 19,83	JUN 21,83	< 0.0014	0.013	0.00030
AUG 16,83	JUL 19,83	< 0.0014	0.009	0.00030
SEP 13,83	AUG 16,83	< 0.0014	0.014	0.00025
OCT 11,83	SEP 13,83	< 0.0014	0.016	0.00017
NOV 8,83	OCT 11,83	< 0.0013	0.013	0.00038
DEC 6,83	NOV 8,83	< 0.0013	0.012	0.00036
JAN 3,84	DEC 6,83	< 0.0012	0.013	0.00031

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL #4

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1500	1600	63500.0	99107	2	1		
MAR 1,83	FEB 1,83	1600	1400	84640.0	99114	2	1		
MAR 29,83	MAR 1,83	1400	1400	85960.0	99120	2	1		
APR 26,83	MAR 29,83	1400	1430	81070.0	99126	2	1		
MAY 24,83	APR 26,83	1430	1200	66160.0	99132	2	1		
JUN 21,83	MAY 24,83	1200	900	66200.0	99137	2	1	B	
JUL 19,83	JUN 21,83	900	1400	73170.0	99146	2	1	B	
AUG 16,83	JUL 19,83	1400	1235	5960.0	99151	2	1	B	F
SEP 13,83	AUG 16,83	1400	1000	76700.0	99156	2	1		
OCT 11,83	SEP 13,83	1300	1450	79800.0	99161	2	1		
NOV 8,83	OCT 11,83	1450	1545	80060.0	99167	2	1		
DEC 6,83	NOV 8,83	1545	1300	79640.0	99173	2	1		
JAN 3,84	DEC 6,83	1300	1300	89530.0	99179	2	1	C	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	28.35	7.16	1.000	1.087	1.435	0.119	0.083
MAR 1,83	FEB 1,83	21.43	6.85	1.604	0.851	0.756	0.095	0.083
MAR 29,83	MAR 1,83	13.49	4.86	1.093	0.582	0.963	0.200	0.049
APR 26,83	MAR 29,83	12.34	4.05	0.731	0.432	0.865	0.129	0.044
MAY 24,83	APR 26,83	14.21	3.75	0.869	0.574	2.107	0.330	0.059
JUN 21,83	MAY 24,83	12.60	9.67	1.462	0.680	1.722	0.217	0.059
JUL 19,83	JUN 21,83	15.50	9.13	1.227	0.738	1.531	0.224	0.114
AUG 16,83	JUL 19,83	U 28.52	U 11.33	U 3.397	U 3.523	U 1.896	U 0.235	U 0.193
SEP 13,83	AUG 16,83	12.26	> 6.52	1.130	0.665	0.626	0.099	0.101
OCT 11,83	SEP 13,83	9.86	6.20	0.919	0.457	1.005	0.143	0.078
NOV 8,83	OCT 11,83	11.67	3.85	1.127	0.500	1.339	0.136	0.078
DEC 6,83	NOV 8,83	34.00	******	******	******	0.608	0.082	0.119
JAN 3,84	DEC 6,83	25.88	3.27	0.835	0.547	0.284	0.044	0.078

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL #4 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.257	0.060	0.042	0.081	0.0099	0.0020	< 0.00079
MAR 1,83	FEB 1,83	0.289	0.110	0.070	0.092	0.0074	0.0027	< 0.00059
MAR 29,83	MAR 1,83	0.212	0.144	0.079	0.066	0.0087	0.0021	0.00151
APR 26,83	MAR 29,83	0.123	0.109	0.045	0.061	0.0056	0.0031	< 0.00062
MAY 24,83	APR 26,83	0.122	0.139	0.141	0.043	0.0129	0.0038	< 0.00076
JUN 21,83	MAY 24,83	******	0.230	0.169	0.082	0.0136	0.0023	< 0.00076
JUL 19,83	JUN 21,83	0.108	0.125	0.221	0.088	0.0144	0.0055	< 0.00068
AUG 16,83	JUL 19,83	U 0.369	U 0.327	U 0.265	U 0.159	U 0.0218	U 0.0084	U 0.00839
SEP 13,83	AUG 16,83	0.085	0.108	0.071	0.068	0.0046	0.0026	< 0.00065
OCT 11,83	SEP 13,83	0.110	0.107	0.076	0.055	0.0094	0.0016	< 0.00063
NOV 8,83	OCT 11,83	0.129	0.088	0.067	0.071	0.0081	0.0016	< 0.00062
DEC 6,83	NOV 8,83	U 0.339	0.058	D 0.068	0.069	0.0075	0.0031	0.00100
JAN 3,84	DEC 6,83	0.100	0.059	0.035	0.054	0.0061	0.0022	< 0.00056

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0016	0.047	0.00050
MAR 1,83	FEB 1,83	0.0018	0.036	0.00030
MAR 29,83	MAR 1,83	< 0.0012	0.031	0.00026
APR 26,83	MAR 29,83	< 0.0012	0.025	0.00027
MAY 24,83	APR 26,83	< 0.0015	0.023	0.00042
JUN 21,83	MAY 24,83	< 0.0015	0.039	0.00048
JUL 19,83	JUN 21,83	< 0.0014	0.038	0.00068
AUG 16,83	JUL 19,83	U 0.0168	U 0.126	U 0.00084
SEP 13,83	AUG 16,83	< 0.0013	0.015	0.00017
OCT 11,83	SEP 13,83	0.0025	0.029	0.00035
NOV 8,83	OCT 11,83	0.0031	0.038	0.00047
DEC 6,83	NOV 8,83	< 0.0013	0.055	0.00094
JAN 3,84	DEC 6,83	< 0.0011	0.041	0.00061

PART IV

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	810	815	85890.0	20768	2	1		
MAR 1,83	FEB 1,83	815	833	95100.0	20811	2	1		
MAR 29,83	MAR 1,83	833	820	96500.0	20854	2	1		
APR 26,83	MAR 29,83	820	915	94710.0	20886	2	1		
MAY 24,83	APR 26,83	925	925	95500.0	20916	2	1		
JUN 21,83	MAY 24,83	925	915	94850.0	20941	2	1		
JUL 19,83	JUN 21,83	915	800	57700.0	20967	2	1		
AUG 16,83	JUL 19,83	800	800	41130.0	24291	2	1	B	
SEP 13,83	AUG 16,83	800	1100	97550.0	21076	2	1		
OCT 11,83	SEP 13,83	1100	800	60520.0	21096	2	1	B	
NOV 8,83	OCT 11,83	800	900	76090.0	21132	2	1		
DEC 6,83	NOV 8,83	900	800	83060.0	21206	2	1		
JAN 3,84	DEC 6,83	800	800	86730.0	21210	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	4.16	3.44	0.661	0.530	0.879	0.051	0.090
MAR 1,83	FEB 1,83	9.88	3.94	0.718	0.442	0.936	0.053	0.076
MAR 29,83	MAR 1,83	3.56	2.80	0.523	0.233	0.570	< 0.026	0.039
APR 26,83	MAR 29,83	3.35	2.94	0.290	0.158	0.555	0.037	0.041
MAY 24,83	APR 26,83	4.16	3.30	0.385	0.183	1.424	0.080	0.071
JUN 21,83	MAY 24,83	2.85	8.43	0.722	0.311	2.568	0.118	0.049
JUL 19,83	JUN 21,83	3.17	4.99	0.628	0.329	2.464	0.133	0.127
AUG 16,83	JUL 19,83	3.96	******	******	******	3.849	0.176	0.467
SEP 13,83	AUG 16,83	5.17	> 5.13	0.471	0.256	2.351	0.117	0.090
OCT 11,83	SEP 13,83	2.09	4.66	0.504	0.140	1.054	0.056	0.062
NOV 8,83	OCT 11,83	1.18	2.17	0.526	0.210	0.773	0.054	0.069
DEC 6,83	NOV 8,83	1.93	2.71	0.572	0.241	0.311	0.030	0.066
JAN 3,84	DEC 6,83	16.45	3.03	0.700	0.525	0.417	0.045	D 0.072

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.320	0.041	0.019	D 0.044	0.0044	0.0015	0.00058
MAR 1,83	FEB 1,83	0.281	0.075	0.052	0.073	0.0053	0.0045	0.00137
MAR 29,83	MAR 1,83	0.181	0.083	0.045	0.048	0.0041	0.0013	0.00104
APR 26,83	MAR 29,83	0.101	0.057	0.027	0.044	0.0024	0.0016	< 0.00053
MAY 24,83	APR 26,83	0.056	0.082	0.039	0.037	0.0073	0.0019	< 0.00052
JUN 21,83	MAY 24,83	0.057	0.182	0.084	0.065	0.0105	0.0026	0.00084
JUL 19,83	JUN 21,83	0.070	0.086	0.336	0.044	0.0121	0.0026	< 0.00087
AUG 16,83	JUL 19,83	U 0.705	D 0.165	0.136	0.050	0.0097	0.0024	< 0.00122
SEP 13,83	AUG 16,83	0.079	0.094	0.085	0.045	0.0108	0.0015	< 0.00051
OCT 11,83	SEP 13,83	0.078	0.086	0.063	0.072	0.0066	< 0.0008	< 0.00083
NOV 8,83	OCT 11,83	0.125	0.057	0.039	0.066	0.0046	0.0011	< 0.00066
DEC 6,83	NOV 8,83	0.132	0.030	0.025	0.039	0.0042	0.0012	< 0.00060
JAN 3,84	DEC 6,83	0.291	0.029	0.030	0.044	0.0035	0.0015	< 0.00058

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0023	0.012	0.00031
MAR 1,83	FEB 1,83	0.0026	0.018	0.00032
MAR 29,83	MAR 1,83	0.0031	0.011	0.00033
APR 26,83	MAR 29,83	< 0.0011	0.010	0.00023
MAY 24,83	APR 26,83	< 0.0010	0.014	0.00034
JUN 21,83	MAY 24,83	< 0.0011	0.016	0.00023
JUL 19,83	JUN 21,83	< 0.0017	0.014	0.00031
AUG 16,83	JUL 19,83	0.0024	0.016	< 0.00012
SEP 13,83	AUG 16,83	< 0.0010	0.021	0.00033
OCT 11,83	SEP 13,83	< 0.0017	0.013	0.00030
NOV 8,83	OCT 11,83	0.0020	0.012	0.00029
DEC 6,83	NOV 8,83	0.0018	0.014	0.00036
JAN 3,84	DEC 6,83	< 0.0012	0.014	0.00046

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL #20 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1200	900	83260.0	97266	2	1		
MAR 1,83	FEB 1,83	900	900	84300.0	97269	2	1		
MAR 29,83	MAR 1,83	902	915	83180.0	97270	2	1		
APR 26,83	MAR 29,83	918	845	82130.0	97275	2	1		
MAY 24,83	APR 26,83	845	925	80450.0	97301	2	1		
JUN 21,83	MAY 24,83	925	1530	80280.0	97328	2	1		
JUL 19,83	JUN 21,83	1530	1120	76940.0	97320	2	1		
AUG 16,83	JUL 19,83	1120	923	77260.0	97346	2	1		
SEP 13,83	AUG 16,83	925	1020	76868.0	29270	2	1		
OCT 11,83	SEP 13,83	1020	945	72991.0	29271	2	1		
NOV 8,83	OCT 11,83	945	930	75821.0	29272	2	1		
DEC 6,83	NOV 8,83	945	1430	79151.0	29273	2	1		
JAN 3,84	DEC 6,83	1430	1515	84868.0	29274	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	3.64	2.76	0.441	0.168	0.091	0.028	0.045
MAR 1,83	FEB 1,83	7.24	3.18	0.471	0.160	0.093	0.025	0.043
MAR 29,83	MAR 1,83	3.16	2.40	0.273	0.162	< 0.120	0.115	0.036
APR 26,83	MAR 29,83	2.84	2.22	0.137	0.055	0.109	0.052	0.021
MAY 24,83	APR 26,83	3.27	2.67	0.242	0.155	0.020	0.051	0.040
JUN 21,83	MAY 24,83	3.11	5.51	0.351	0.106	0.211	0.061	0.037
JUL 19,83	JUN 21,83	1.69	4.13	0.273	0.208	0.213	0.083	0.053
AUG 16,83	JUL 19,83	1.72	3.56	0.194	0.181	0.111	0.061	0.038
SEP 13,83	AUG 16,83	2.56	> 6.51	0.270	0.143	0.177	0.060	0.059
OCT 11,83	SEP 13,83	2.70	4.32	0.291	0.137	0.098	0.026	0.051
NOV 8,83	OCT 11,83	2.95	1.74	0.303	0.178	0.101	0.026	0.033
DEC 6,83	NOV 8,83	1.98	2.34	0.347	0.171	0.047	0.018	0.035
JAN 3,84	DEC 6,83	14.78	2.71	0.448	0.141	0.035	0.026	0.044

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL #20 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.154	0.031	0.029	0.029	< 0.0006	0.0010	< 0.00060
MAR 1,83	FEB 1,83	0.142	0.058	0.025	0.036	0.0021	0.0015	< 0.00059
MAR 29,83	MAR 1,83	0.014	0.045	0.033	0.019	0.0016	0.0028	< 0.00060
APR 26,83	MAR 29,83	0.076	0.056	0.033	0.018	0.0016	0.0016	0.00097
MAY 24,83	APR 26,83	0.078	0.108	0.062	0.027	0.0031	0.0016	< 0.00062
JUN 21,83	MAY 24,83	0.067	0.110	0.095	0.021	0.0044	0.0016	< 0.00062
JUL 19,83	JUN 21,83	0.060	D 0.192	0.143	0.022	0.0065	0.0010	< 0.00065
AUG 16,83	JUL 19,83	0.041	0.158	0.202	0.023	0.0058	0.0017	< 0.00065
SEP 13,83	AUG 16,83	0.059	0.129	0.085	0.031	0.0052	0.0033	< 0.00065
OCT 11,83	SEP 13,83	0.065	0.062	0.028	0.023	0.0041	0.0034	< 0.00069
NOV 8,83	OCT 11,83	0.112	0.038	0.021	0.018	0.0026	0.0020	< 0.00066
DEC 6,83	NOV 8,83	0.088	0.028	0.012	0.018	0.0025	D 0.0019	< 0.00063
JAN 3,84	DEC 6,83	0.136	0.024	0.013	0.024	0.0015	0.0024	< 0.00059

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0012	0.026	0.00016
MAR 1,83	FEB 1,83	< 0.0012	0.018	0.00077
MAR 29,83	MAR 1,83	< 0.0012	0.016	0.00042
APR 26,83	MAR 29,83	< 0.0012	0.007	0.00034
MAY 24,83	APR 26,83	< 0.0012	0.010	0.00027
JUN 21,83	MAY 24,83	< 0.0012	0.010	0.00027
JUL 19,83	JUN 21,83	< 0.0013	0.008	0.00016
AUG 16,83	JUL 19,83	< 0.0013	0.010	D 0.00036
SEP 13,83	AUG 16,83	< 0.0013	0.012	0.00039
OCT 11,83	SEP 13,83	< 0.0014	0.010	0.00030
NOV 8,83	OCT 11,83	< 0.0013	0.009	0.00016
DEC 6,83	NOV 8,83	< 0.0013	0.009	0.00023
JAN 3,84	DEC 6,83	< 0.0012	0.010	0.00053

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL #10

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 5,83	1335	930	65130.0	40010	2	1	A	
MAR 1,83	FEB 1,83	930	900	33460.0	40020	2	1	A	F
MAR 29,83	MAR 1,83	900	830	64810.0	40037	2	1	AB	
APR 26,83	MAR 29,83	830	845	51620.0	40046	2	1	B	
MAY 24,83	APR 26,83	845	830	43850.0	40076	2	1		
JUN 21,83	MAY 24,83	900	900	75670.0	40078	2	1		
JUL 19,83	JUN 21,83	900	900	75840.0	40085	2	1	A	
AUG 16,83	JUL 19,83	900	900	63600.0	40086	2	1		
SEP 13,83	AUG 16,83	900	930	73910.0	54017	2	1		
OCT 11,83	SEP 13,83	930	900	77730.0	54019	2	1		
NOV 8,83	OCT 11,83	900	900	77130.0	40101	2	1		
DEC 6,83	NOV 8,83	900	1000	84020.0	40109	2	1		
JAN 3,84	DEC 6,83	1000	1245	87390.0	40116	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 5,83	U 2.76	U 0.35	U 0.088	0.230	******	******	0.023
MAR 1,83	FEB 1,83	8.88	1.72	0.568	1.240	< 0.299	< 0.075	D 0.045
MAR 29,83	MAR 1,83	15.03	4.04	0.964	1.057	0.730	0.189	0.050
APR 26,83	MAR 29,83	6.06	3.64	0.455	0.581	1.404	D 0.511	0.034
MAY 24,83	APR 26,83	12.47	5.70	1.117	0.616	1.441	0.499	0.117
JUN 21,83	MAY 24,83	10.40	9.45	1.189	0.496	1.295	0.517	0.104
JUL 19,83	JUN 21,83	6.69	5.80	0.765	0.455	2.859	U 1.545	D 0.156
AUG 16,83	JUL 19,83	4.83	6.89	0.790	0.487	1.531	U 0.736	0.089
SEP 13,83	AUG 16,83	4.37	> 6.77	0.934	0.399	D 2.027	U 0.873	0.101
OCT 11,83	SEP 13,83	5.33	5.60	0.731	0.379	0.971	0.373	0.077
NOV 8,83	OCT 11,83	3.29	5.90	0.801	0.525	0.897	0.298	U 3.371
DEC 6,83	NOV 8,83	5.68	3.57	0.863	0.637	0.581	0.140	0.092
JAN 3,84	DEC 6,83	21.83	3.75	0.893	0.984	0.357	0.102	0.080

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL #10 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 5,83	0.189	******	******	******	******	******	*******
MAR 1,83	FEB 1,83	U 0.649	D 0.145	0.062	0.052	0.0075	0.0039	< 0.00149
MAR 29,83	MAR 1,83	U 0.373	0.169	0.068	0.165	0.0123	0.0020	0.00123
APR 26,83	MAR 29,83	U 0.403	D 0.248	0.101	D 0.189	0.0165	0.0035	0.00252
MAY 24,83	APR 26,83	0.122	0.197	0.073	D 0.149	0.0194	0.0030	< 0.00114
JUN 21,83	MAY 24,83	0.088	0.214	0.054	0.156	0.0178	D 0.0046	< 0.00066
JUL 19,83	JUN 21,83	0.084	0.179	0.171	0.113	D 0.0277	0.0033	< 0.00066
AUG 16,83	JUL 19,83	0.150	0.064	0.112	0.154	0.0173	0.0039	0.00204
SEP 13,83	AUG 16,83	0.101	D 0.202	0.087	D 0.153	0.0203	0.0031	< 0.00068
OCT 11,83	SEP 13,83	D 0.087	D 0.125	0.057	D 0.153	0.0148	D 0.0039	< 0.00064
NOV 8,83	OCT 11,83	U 0.292	0.099	0.046	0.145	0.0156	0.0017	< 0.00065
DEC 6,83	NOV 8,83	U 0.315	0.107	0.048	D 0.145	0.0101	0.0018	< 0.00060
JAN 3,84	DEC 6,83	U 0.572	0.076	0.037	0.100	0.0092	0.0017	< 0.00057

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 5,83	******	******	*******
MAR 1,83	FEB 1,83	< 0.0030	0.013	0.00024
MAR 29,83	MAR 1,83	< 0.0015	0.040	0.00034
APR 26,83	MAR 29,83	< 0.0019	0.026	0.00035
MAY 24,83	APR 26,83	< 0.0023	0.056	0.00064
JUN 21,83	MAY 24,83	< 0.0013	0.042	0.00042
JUL 19,83	JUN 21,83	< 0.0013	0.024	0.00079
AUG 16,83	JUL 19,83	< 0.0016	0.027	0.00055
SEP 13,83	AUG 16,83	< 0.0014	0.047	0.00043
OCT 11,83	SEP 13,83	0.0019	0.046	D 0.00058
NOV 8,83	OCT 11,83	0.0019	0.061	0.00123
DEC 6,83	NOV 8,83	0.0018	0.085	0.00062
JAN 3,84	DEC 6,83	< 0.0011	0.033	0.00069

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL #11 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 31,83	JAN 3,83	1600	1530	54940.0	40009	2	1		
MAR 1,83	JAN 31,83	1530	1030	74190.0	40019	2	1		
MAR 29,83	MAR 1,83	1030	1020	71280.0	40038	2	1		
APR 25,83	MAR 29,83	1020	1700	75440.0	40047	2	1		
MAY 24,83	APR 25,83	1800	1630	48100.0	40077	2	1		
JUN 21,83	MAY 24,83	1630	600	71310.0	40079	2	1		
JUL 18,83	JUN 21,83	600	1900	76200.0	40083	2	1	A	
AUG 15,83	JUL 18,83	1900	1800	80532.0	40084	2	1	A	
SEP 12,83	AUG 15,83	1800	1830	72410.0	54018	2	1		
OCT 10,83	SEP 12,83	1830	1600	73310.0	54020	2	1		
NOV 8,83	OCT 10,83	1830	1030	74590.0	40102	2	1		
DEC 6,83	NOV 8,83	1700	1000	77220.0	40110	2	1		
JAN 2,84	DEC 6,83	1000	1700	75920.0	40117	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 31,83	JAN 3,83	8.68	3.97	0.824	0.610	0.719	0.057	0.064
MAR 1,83	JAN 31,83	11.96	5.08	0.974	0.809	0.876	0.129	0.084
MAR 29,83	MAR 1,83	D 6.09	3.82	0.645	0.379	0.717	0.153	0.042
APR 25,83	MAR 29,83	3.01	3.05	0.325	0.219	D 1.690	< 0.033	0.027
MAY 24,83	APR 25,83	D 16.36	3.64	0.543	0.374	2.732	0.116	0.053
JUN 21,83	MAY 24,83	4.73	11.22	1.080	0.596	U 10.730	U 0.328	D 0.286
JUL 18,83	JUN 21,83	3.54	5.51	0.522	0.302	1.783	0.123	0.068
AUG 15,83	JUL 18,83	2.23	4.59	0.317	0.267	1.581	0.079	0.235
SEP 12,83	AUG 15,83	4.42	7.80	0.522	0.400	1.991	0.121	0.090
OCT 10,83	SEP 12,83	2.41	4.71	0.556	0.252	0.526	0.060	0.048
NOV 8,83	OCT 10,83	1.83	2.01	0.540	0.215	0.512	0.042	0.070
DEC 6,83	NOV 8,83	2.25	2.72	0.680	0.233	0.331	0.032	0.071
JAN 2,84	DEC 6,83	16.52	2.90	0.685	0.402	0.201	0.039	0.049

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL #11 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 31,83	JAN 3,83	0.309	0.044	0.028	0.059	0.0015	U 0.0178	< 0.00091
MAR 1,83	JAN 31,83	U 0.468	0.094	0.053	0.047	0.0067	0.0038	U 0.00445
MAR 29,83	MAR 1,83	0.267	0.095	0.052	0.063	0.0056	0.0025	< 0.00070
APR 25,83	MAR 29,83	0.126	0.107	0.056	0.046	0.0053	0.0017	0.00172
MAY 24,83	APR 25,83	0.103	0.078	0.040	0.031	D 0.0135	0.0031	< 0.00104
JUN 21,83	MAY 24,83	0.117	0.132	0.096	0.036	0.0217	0.0025	< 0.00070
JUL 18,83	JUN 21,83	0.068	0.061	0.177	D 0.069	0.0111	0.0020	< 0.00066
AUG 15,83	JUL 18,83	0.127	0.052	0.094	0.061	0.0081	0.0035	< 0.00062
SEP 12,83	AUG 15,83	D 0.117	0.094	0.078	0.041	0.0111	0.0028	< 0.00069
OCT 10,83	SEP 12,83	0.095	0.057	0.042	0.046	0.0068	0.0018	< 0.00068
NOV 8,83	OCT 10,83	0.127	0.052	0.030	0.054	0.0054	0.0011	< 0.00067
DEC 6,83	NOV 8,83	0.129	0.044	0.029	0.047	0.0032	< 0.0006	< 0.00065
JAN 2,84	DEC 6,83	0.237	0.053	0.029	0.057	0.0033	0.0017	< 0.00066

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 31,83	JAN 3,83	< 0.0018	0.033	< 0.00009
MAR 1,83	JAN 31,83	< 0.0013	0.030	< 0.00007
MAR 29,83	MAR 1,83	< 0.0014	0.021	0.00049
APR 25,83	MAR 29,83	< 0.0013	0.011	0.00024
MAY 24,83	APR 25,83	0.0021	< 0.018	0.00037
JUN 21,83	MAY 24,83	< 0.0014	0.018	0.00035
JUL 18,83	JUN 21,83	< 0.0013	0.015	0.00037
AUG 15,83	JUL 18,83	< 0.0012	0.014	0.00062
SEP 12,83	AUG 15,83	0.0028	0.020	0.00025
OCT 10,83	SEP 12,83	< 0.0014	0.025	0.00030
NOV 8,83	OCT 10,83	< 0.0013	0.019	0.00043
DEC 6,83	NOV 8,83	< 0.0013	0.062	0.00045
JAN 2,84	DEC 6,83	< 0.0013	0.015	0.00066

PART V

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	900	700	73940.0	20767	2	1		
MAR 1,83	FEB 1,83	700	900	77500.0	20810	2	1		
MAR 29,83	MAR 1,83	900	900	55930.0	20852	2	1		
APR 25,83	MAR 29,83	900	900	82920.0	20888	2	1		
MAY 24,83	APR 25,83	900	900	51290.0	20919	2	1		
JUN 21,83	MAY 24,83	900	730	98860.0	20942	2	1		
JUL 19,83	JUN 21,83	730	730	75410.0	20968	2	1	B	
AUG 16,83	JUL 19,83	730	730	85650.0	24292	2	1		
SEP 13,83	AUG 16,83	730	700	75530.0	21073	2	1		
OCT 11,83	SEP 13,83	800	700	69190.0	21093	2	1	B	
NOV 8,83	OCT 11,83	700	700	80520.0	21131	2	1	C	
DEC 6,83	NOV 8,83	700	830	66810.0	21207	2	1		
JAN 3,84	DEC 6,83	830	800	61580.0	21211	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	6.01	D 4.44	0.801	1.488	0.725	0.085	D 0.223
MAR 1,83	FEB 1,83	12.57	4.45	0.713	1.355	1.368	0.299	0.142
MAR 29,83	MAR 1,83	D 14.91	D 5.99	1.041	D 0.903	0.915	0.151	D 0.170
APR 25,83	MAR 29,83	3.86	D 3.11	0.395	0.247	0.433	0.054	0.065
MAY 24,83	APR 25,83	2.67	3.22	0.448	0.273	0.909	0.078	0.061
JUN 21,83	MAY 24,83	2.70	8.24	0.580	0.329	1.477	0.125	0.073
JUL 19,83	JUN 21,83	1.82	3.71	0.328	0.285	0.631	0.074	0.063
AUG 16,83	JUL 19,83	1.97	2.66	0.120	******	0.116	0.030	0.044
SEP 13,83	AUG 16,83	3.93	8.41	0.384	D 0.311	0.910	0.107	U 0.377
OCT 11,83	SEP 13,83	1.64	3.69	0.412	0.152	D 0.727	D 0.061	0.083
NOV 8,83	OCT 11,83	1.82	2.23	0.500	0.304	0.622	0.080	0.087
DEC 6,83	NOV 8,83	2.84	3.56	0.591	0.397	0.569	0.071	U 0.748
JAN 3,84	DEC 6,83	10.88	4.22	0.995	0.812	0.153	0.051	0.122

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	1.048	0.073	0.067	0.080	0.0241	0.0024	0.00406
MAR 1,83	FEB 1,83	0.968	D 0.115	0.064	0.092	0.0193	0.0030	0.00361
MAR 29,83	MAR 1,83	0.658	0.191	0.097	0.139	U 0.0572	0.0032	0.00447
APR 25,83	MAR 29,83	0.169	0.074	0.030	0.077	0.0078	0.0018	< 0.00060
MAY 24,83	APR 25,83	0.134	0.107	0.048	0.055	0.0146	D 0.0029	< 0.00097
JUN 21,83	MAY 24,83	0.084	0.166	0.111	0.075	0.0126	0.0018	< 0.00051
JUL 19,83	JUN 21,83	0.076	0.087	0.138	0.064	0.0066	0.0040	0.00106
AUG 16,83	JUL 19,83	0.041	0.028	0.042	0.014	0.0035	0.0027	< 0.00058
SEP 13,83	AUG 16,83	D 0.165	0.117	0.109	0.044	0.0159	0.0020	< 0.00066
OCT 11,83	SEP 13,83	0.112	0.086	0.081	0.069	D 0.0181	0.0012	< 0.00072
NOV 8,83	OCT 11,83	0.174	0.077	0.049	0.080	0.0118	0.0016	0.00099
DEC 6,83	NOV 8,83	0.228	0.056	0.049	0.078	0.0180	0.0037	< 0.00075
JAN 3,84	DEC 6,83	0.516	0.047	0.035	0.075	0.0179	0.0049	< 0.00081

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0162	0.028	0.00043
MAR 1,83	FEB 1,83	0.0103	0.031	0.00045
MAR 29,83	MAR 1,83	0.0161	D 0.045	0.00089
APR 25,83	MAR 29,83	0.0042	0.024	0.00027
MAY 24,83	APR 25,83	< 0.0019	D 0.052	0.00055
JUN 21,83	MAY 24,83	< 0.0010	0.024	0.00042
JUL 19,83	JUN 21,83	< 0.0013	0.013	0.00020
AUG 16,83	JUL 19,83	< 0.0012	0.005	< 0.00006
SEP 13,83	AUG 16,83	< 0.0013	0.022	0.00053
OCT 11,83	SEP 13,83	0.0022	0.023	0.00032
NOV 8,83	OCT 11,83	0.0050	0.032	D 0.00056
DEC 6,83	NOV 8,83	0.0082	0.025	0.00045
JAN 3,84	DEC 6,83	0.0081	0.028	0.00057

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	720	740	54320.0	20766	2	1		
MAR 1,83	FEB 1,83	740	745	51690.0	20809	2	1		
MAR 29,83	MAR 1,83	745	730	80740.0	20851	2	1		
APR 26,83	MAR 29,83	730	1345	74020.0	20887	2	1		
MAY 24,83	APR 26,83	1345	715	71760.0	20918	2	1		
JUN 21,83	MAY 24,83	715	700	66950.0	20939	2	1	B	
JUL 19,83	JUN 21,83	945	945	44520.0	20970	2	1	B	
AUG 16,83	JUL 19,83	945	630	73850.0	24294	2	1		
SEP 13,83	AUG 16,83	800	1400	74300.0	21075	2	1		
OCT 11,83	SEP 13,83	1400	705	69030.0	21095	2	1		
NOV 8,83	OCT 11,83	715	2010	76380.0	21130	2	1		
DEC 6,83	NOV 8,83	2010	725	58630.0	21205	2	1	A	
JAN 3,84	DEC 6,83	730	645	87710.0	21209	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	3.00	2.95	0.574	0.322	0.162	0.057	0.069
MAR 1,83	FEB 1,83	7.10	2.90	0.411	0.309	< 0.193	< 0.048	0.058
MAR 29,83	MAR 1,83	3.68	2.70	0.421	0.204	0.030	0.065	0.040
APR 26,83	MAR 29,83	2.66	2.23	0.165	0.088	0.079	0.024	0.071
MAY 24,83	APR 26,83	1.57	2.51	0.139	0.104	0.199	0.046	0.046
JUN 21,83	MAY 24,83	1.40	6.12	0.254	0.164	0.228	0.060	0.043
JUL 19,83	JUN 21,83	1.50	3.37	0.213	0.225	0.149	0.045	0.064
AUG 16,83	JUL 19,83	2.56	******	******	******	******	******	0.074
SEP 13,83	AUG 16,83	1.84	5.86	0.131	0.155	0.170	0.038	0.057
OCT 11,83	SEP 13,83	0.68	3.36	0.188	0.043	0.165	0.023	0.054
NOV 8,83	OCT 11,83	1.18	1.57	0.252	0.059	0.198	0.040	0.052
DEC 6,83	NOV 8,83	1.19	2.22	0.350	0.171	0.080	0.028	0.098
JAN 3,84	DEC 6,83	8.97	2.17	0.371	0.285	0.054	0.038	0.051

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.276	0.041	0.013	0.046	0.0042	0.0015	0.00184
MAR 1,83	FEB 1,83	0.223	0.052	0.076	0.023	0.0035	0.0025	< 0.00097
MAR 29,83	MAR 1,83	0.180	0.074	0.045	0.046	0.0050	0.0019	0.00124
APR 26,83	MAR 29,83	0.115	0.036	0.010	0.031	0.0018	0.0020	< 0.00068
MAY 24,83	APR 26,83	0.069	0.057	0.026	0.038	0.0032	0.0014	< 0.00070
JUN 21,83	MAY 24,83	0.088	0.138	0.079	0.051	0.0052	0.0012	0.00194
JUL 19,83	JUN 21,83	0.077	0.072	0.090	0.020	0.0090	0.0045	U 0.00561
AUG 16,83	JUL 19,83	0.047	******	******	******	******	******	*******
SEP 13,83	AUG 16,83	0.061	0.036	0.038	0.020	0.0047	< 0.0007	< 0.00067
OCT 11,83	SEP 13,83	0.069	0.057	0.028	0.036	0.0033	0.0012	< 0.00072
NOV 8,83	OCT 11,83	0.098	0.034	0.022	0.034	0.0033	0.0010	< 0.00065
DEC 6,83	NOV 8,83	0.136	0.024	0.014	0.029	0.0094	0.0039	< 0.00085
JAN 3,84	DEC 6,83	0.220	0.019	0.013	0.031	0.0029	0.0015	0.00285

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0111	0.009	0.00031
MAR 1,83	FEB 1,83	< 0.0019	0.011	0.00023
MAR 29,83	MAR 1,83	0.0037	0.015	0.00056
APR 26,83	MAR 29,83	< 0.0014	0.007	0.00030
MAY 24,83	APR 26,83	< 0.0014	0.010	0.00039
JUN 21,83	MAY 24,83	< 0.0015	0.008	0.00027
JUL 19,83	JUN 21,83	< 0.0022	0.008	0.00018
AUG 16,83	JUL 19,83	******	******	*******
SEP 13,83	AUG 16,83	< 0.0013	0.011	0.00030
OCT 11,83	SEP 13,83	< 0.0014	0.009	0.00026
NOV 8,83	OCT 11,83	0.0026	0.016	0.00016
DEC 6,83	NOV 8,83	< 0.0017	0.013	0.00034
JAN 3,84	DEC 6,83	< 0.0011	0.013	0.00046

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1630	945	88970.0	20769	2	1		
MAR 1,83	FEB 1,83	945	945	100180.0	20812	2	1		
MAR 29,83	MAR 1,83	945	945	100270.0	20853	2	1		
APR 26,83	MAR 29,83	945	955	99920.0	20889	2	1		
MAY 24,83	APR 26,83	955	1130	95260.0	20917	2	1		
JUN 21,83	MAY 24,83	1130	945	87140.0	20940	2	1		
JUL 19,83	JUN 21,83	945	945	97450.0	20969	2	1		
AUG 16,83	JUL 19,83	945	1300	109190.0	24293	2	1		
SEP 13,83	AUG 16,83	1300	1000	114640.0	21074	2	1		
OCT 11,83	SEP 13,83	1000	1535	111670.0	21094	2	1	AC	
NOV 8,83	OCT 11,83	1535	1040	73000.0	21129	2	1		
DEC 6,83	NOV 8,83	1040	1500	93130.0	21208	2	1		
JAN 3,84	DEC 6,83	1500	930	96090.0	21212	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	5.22	3.13	0.663	0.736	0.296	0.093	0.081
MAR 1,83	FEB 1,83	9.72	3.61	0.634	0.634	0.417	0.102	0.090
MAR 29,83	MAR 1,83	4.66	2.51	0.618	0.304	******	******	0.050
APR 26,83	MAR 29,83	1.97	2.40	0.290	0.190	0.302	0.106	0.104
MAY 24,83	APR 26,83	3.51	3.17	0.349	0.189	1.312	D 0.547	0.044
JUN 21,83	MAY 24,83	3.06	7.92	0.612	0.373	U 2.566	U 1.111	0.055
JUL 19,83	JUN 21,83	2.19	3.51	0.398	0.308	U 2.519	U 1.190	0.068
AUG 16,83	JUL 19,83	1.92	> 4.58	0.412	******	U 1.920	U 0.692	0.112
SEP 13,83	AUG 16,83	0.90	2.98	0.231	0.144	0.551	D 0.365	0.022
OCT 11,83	SEP 13,83	U 0.72	U 0.27	U 0.107	U 0.004	U 0.104	U 0.024	U 0.007
NOV 8,83	OCT 11,83	1.01	2.06	0.521	0.206	1.192	D 0.459	0.065
DEC 6,83	NOV 8,83	1.81	2.71	0.505	0.242	0.613	D 0.248	0.064
JAN 3,84	DEC 6,83	12.49	2.91	0.715	0.682	0.280	0.130	0.086

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.545	0.037	0.029	0.076	0.0093	< 0.0006	0.00202
MAR 1,83	FEB 1,83	0.479	0.057	0.036	0.057	0.0085	0.0018	0.00130
MAR 29,83	MAR 1,83	0.224	******	******	******	******	******	*******
APR 26,83	MAR 29,83	0.112	0.059	0.025	0.067	0.0050	0.0020	< 0.00050
MAY 24,83	APR 26,83	0.095	0.075	0.026	0.036	0.0126	0.0014	< 0.00052
JUN 21,83	MAY 24,83	0.100	0.200	0.095	0.058	0.0235	0.0029	0.00092
JUL 19,83	JUN 21,83	0.058	0.071	0.181	0.040	D 0.0200	0.0031	0.00082
AUG 16,83	JUL 19,83	D 0.114	0.147	0.084	0.067	0.0175	0.0033	< 0.00046
SEP 13,83	AUG 16,83	0.052	0.059	0.034	0.019	0.0083	0.0011	< 0.00044
OCT 11,83	SEP 13,83	U 0.031	U 0.011	U 0.008	U 0.013	U 0.0012	U 0.0004	< 0.00045
NOV 8,83	OCT 11,83	0.148	0.074	0.053	0.069	0.0212	0.0018	< 0.00068
DEC 6,83	NOV 8,83	0.169	0.040	0.040	0.049	0.0226	0.0038	< 0.00054
JAN 3,84	DEC 6,83	0.479	0.045	0.030	0.094	0.0104	0.0019	< 0.00052

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0051	0.017	0.00053
MAR 1,83	FEB 1,83	0.0065	0.023	0.00040
MAR 29,83	MAR 1,83	******	******	*******
APR 26,83	MAR 29,83	< 0.0010	0.037	0.00022
MAY 24,83	APR 26,83	< 0.0011	0.012	0.00023
JUN 21,83	MAY 24,83	< 0.0011	0.017	0.00032
JUL 19,83	JUN 21,83	< 0.0010	0.009	0.00031
AUG 16,83	JUL 19,83	< 0.0009	0.029	< 0.00005
SEP 13,83	AUG 16,83	< 0.0009	0.007	0.00016
OCT 11,83	SEP 13,83	< 0.0009	U 0.004	U 0.00007
NOV 8,83	OCT 11,83	0.0034	0.038	0.00025
DEC 6,83	NOV 8,83	0.0048	0.018	0.00043
JAN 3,84	DEC 6,83	0.0026	0.015	0.00040

PART VI

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 16,83	DEC 16,82	1335	1315	19530.0	35072	2	1	B	FZ
FEB 1,83	JAN 16,83	1315	1310	27010.0	35078	2	1	A	Z
MAR 3,83	FEB 1,83	1310	1320	120.0	35084	2	1	A	FZ
MAY 24,83	APR 26,83	945	800	89540.0	35102	2	1		
JUN 22,83	MAY 24,83	1320	1315	75630.0	35108	2	1		
JUL 20,83	JUN 22,83	1315	1410	22610.0	35114	2	1	AB	F
AUG 29,83	JUL 20,83	1410	1315	28971.0	35120	2	1	B	FZ
SEP 13,83	AUG 29,83	1315	1310	26003.0	35126	2	1	B	Z
OCT 13,83	SEP 13,83	1310	1245	13872.0	35132	2	1	C	FZ
NOV 9,83	OCT 13,83	1245	1015	********	35138	2	1	C	F
DEC 7,83	NOV 9,83	1015	1312	********	35146	2	1		F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 16,83	DEC 16,82	3.07	5.38	0.294	U 2.586	0.709	0.379	0.681
FEB 1,83	JAN 16,83	2.10	2.68	0.148	0.740	0.215	0.128	0.222
MAR 3,83	FEB 1,83	U 83.33	U 166.70	U 4.167	U 66.670	U 23.750	U 5.000	U 4.167
MAY 24,83	APR 26,83	0.41	1.84	0.067	0.352	0.675	0.145	0.055
JUN 22,83	MAY 24,83	0.84	1.98	0.079	0.298	1.017	0.206	0.046
JUL 20,83	JUN 22,83	1.33	3.32	0.055	U 3.317	U 6.776	U 1.455	0.161
AUG 29,83	JUL 20,83	0.88	2.59	0.026	******	U 15.310	U 3.307	0.147
SEP 13,83	AUG 29,83	0.86	******	******	******	U 6.530	U 1.492	0.096
OCT 13,83	SEP 13,83	<W 0.24	5.41	0.054	U 4.037	0.620	0.404	U 14.420
NOV 9,83	OCT 13,83	******	******	******	******	******	******	******
DEC 7,83	NOV 9,83	******	******	******	******	******	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 16,83	DEC 16,82	U 1.372	0.086	< 0.013	0.066	0.0102	< 0.0026	< 0.00256
FEB 1,83	JAN 16,83	0.352	0.047	0.046	0.020	0.0019	< 0.0019	< 0.00185
MAR 3,83	FEB 1,83	U 25.000	U 7.333	U 2.083	U 0.417	U 0.4167	U 0.4167	U 0.41670
MAY 24,83	APR 26,83	0.118	0.054	0.051	0.018	0.0028	0.0011	0.00089
JUN 22,83	MAY 24,83	0.110	0.044	0.021	0.034	0.0030	< 0.0007	< 0.00066
JUL 20,83	JUN 22,83	U 0.593	0.478	0.291	0.042	0.0177	0.0035	< 0.00221
AUG 29,83	JUL 20,83	0.181	0.549	0.284	0.070	0.0190	< 0.0017	< 0.00173
SEP 13,83	AUG 29,83	0.415	0.268	0.173	0.057	0.0119	0.0031	< 0.00192
OCT 13,83	SEP 13,83	U 2.343	0.071	0.042	0.020	0.0058	0.0072	< 0.00360
NOV 9,83	OCT 13,83	******	******	******	******	******	******	*******
DEC 7,83	NOV 9,83	******	******	******	******	******	******	*******

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 16,83	DEC 16,82	< 0.0051	0.082	0.00102
FEB 1,83	JAN 16,83	< 0.0037	0.065	0.00111
MAR 3,83	FEB 1,83	U 0.8333	U 5.833	U 0.20830
MAY 24,83	APR 26,83	< 0.0011	0.006	0.00013
JUN 22,83	MAY 24,83	< 0.0013	0.005	0.00011
JUL 20,83	JUN 22,83	< 0.0044	0.022	0.00044
AUG 29,83	JUL 20,83	0.0035	0.016	< 0.00017
SEP 13,83	AUG 29,83	< 0.0038	0.019	< 0.00019
OCT 13,83	SEP 13,83	< 0.0072	0.047	U 0.00901
NOV 9,83	OCT 13,83	******	******	*******
DEC 7,83	NOV 9,83	******	******	*******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL #25 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	845	1030	64100.0	35077	2	1		
MAR 1,83	FEB 1,83	1030	1200	79010.0	35082	2	1		
MAR 29,83	MAR 1,83	1200	1118	91120.0	35086	2	1		
APR 26,83	MAR 29,83	1118	1030	87610.0	35094	2	1		
MAY 24,83	APR 26,83	1030	1030	82190.0	35100	2	1		
JUN 21,83	MAY 24,83	1045	1245	77280.0	35106	2	1		
JUL 19,83	JUN 21,83	1245	1145	74060.0	35112	2	1		
AUG 16,83	JUL 19,83	1145	1040	75602.0	35118	2	1		
SEP 13,83	AUG 16,83	1040	1230	83948.0	35124	2	1		
OCT 11,83	SEP 13,83	1230	1850	86216.0	35130	2	1		
NOV 8,83	OCT 11,83	1850	1315	84357.0	35136	2	1		
DEC 6,83	NOV 8,83	1315	1115	27772.0	35144	2	1	B	F
JAN 3,84	DEC 6,83	1115	1300	77899.5	35152	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	3.59	2.57	0.346	0.156	0.071	0.036	0.035
MAR 1,83	FEB 1,83	4.99	2.70	0.325	0.044	0.053	0.020	0.038
MAR 29,83	MAR 1,83	3.48	2.27	0.137	0.110	< 0.110	< 0.027	D 0.115
APR 26,83	MAR 29,83	1.40	1.85	0.074	0.074	0.063	0.041	D 0.138
MAY 24,83	APR 26,83	2.96	1.82	0.100	0.085	0.118	0.048	0.027
JUN 21,83	MAY 24,83	3.53	4.43	0.071	0.091	0.135	0.100	0.034
JUL 19,83	JUN 21,83	1.08	1.92	0.213	0.149	0.165	0.055	0.041
AUG 16,83	JUL 19,83	2.42	2.54	0.132	0.146	0.063	0.042	0.040
SEP 13,83	AUG 16,83	1.69	3.84	0.152	******	0.124	0.047	0.054
OCT 11,83	SEP 13,83	3.68	3.57	0.188	0.174	0.079	0.028	0.043
NOV 8,83	OCT 11,83	3.99	1.52	0.240	0.089	0.101	0.023	0.036
DEC 6,83	NOV 8,83	3.54	1.53	0.171	0.252	< 0.036	0.014	<T 0.018
JAN 3,84	DEC 6,83	6.03	1.96	0.154	0.270	0.023	0.032	0.026

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL #25 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.169	0.024	0.017	0.024	0.0008	0.0012	< 0.00078
MAR 1,83	FEB 1,83	0.111	0.025	0.005	0.033	0.0032	0.0016	< 0.00063
MAR 29,83	MAR 1,83	0.159	0.082	0.076	0.021	0.0027	D 0.0060	< 0.00055
APR 26,83	MAR 29,83	0.095	0.086	0.034	0.022	0.0023	0.0023	< 0.00057
MAY 24,83	APR 26,83	0.066	0.092	0.056	0.028	0.0030	0.0024	< 0.00061
JUN 21,83	MAY 24,83	0.068	0.210	0.088	0.028	0.0052	0.0036	0.00168
JUL 19,83	JUN 21,83	0.070	0.087	0.219	0.022	0.0068	0.0034	0.00176
AUG 16,83	JUL 19,83	0.041	0.068	0.123	0.019	0.0040	0.0046	< 0.00066
SEP 13,83	AUG 16,83	0.048	0.079	0.054	0.017	0.0042	0.0030	< 0.00060
OCT 11,83	SEP 13,83	0.081	0.044	0.025	0.017	0.0029	0.0017	< 0.00058
NOV 8,83	OCT 11,83	0.089	0.037	0.042	0.022	0.0024	0.0024	U 0.01363
DEC 6,83	NOV 8,83	0.099	0.024	0.014	0.014	< 0.0018	0.0029	< 0.00180
JAN 3,84	DEC 6,83	0.167	0.016	0.007	0.026	0.0019	0.0026	0.00103

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0016	0.013	0.00019
MAR 1,83	FEB 1,83	< 0.0013	0.021	0.00059
MAR 29,83	MAR 1,83	< 0.0011	0.023	0.00060
APR 26,83	MAR 29,83	< 0.0011	0.009	0.00025
MAY 24,83	APR 26,83	< 0.0012	0.009	0.00027
JUN 21,83	MAY 24,83	< 0.0013	0.010	0.00054
JUL 19,83	JUN 21,83	< 0.C014	0.007	0.00016
AUG 16,83	JUL 19,83	< 0.0013	0.009	0.00053
SEP 13,83	AUG 16,83	< 0.0012	0.008	0.00033
OCT 11,83	SEP 13,83	< 0.0012	0.013	0.00041
NOV 8,83	OCT 11,83	< 0.0012	0.008	0.00041
DEC 6,83	NOV 8,83	< 0.0036	0.011	0.00029
JAN 3,84	DEC 6,83	< 0.0013	0.017	0.00115

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL #23

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 5,83	1025	1300	79960.0	35074	2	1		
MAR 1,83	FEB 1,83	1300	930	69600.0	35080	2	1	C	
MAR 29,83	MAR 1,83	930	930	58610.0	35088	2	1		
APR 26,83	MAR 29,83	1010	1340	90520.0	35092	2	1		
MAY 25,83	APR 26,83	1340	1700	97470.0	35098	2	1		
JUN 21,83	MAY 25,83	1700	1100	91530.0	35104	2	1		
JUL 19,83	JUN 21,83	1100	800	95760.0	35110	2	1		
AUG 16,83	JUL 19,83	800	850	89670.0	35116	2	1		
SEP 13,83	AUG 16,83	850	820	84799.0	35122	2	1		
OCT 11,83	SEP 13,83	820	1650	12848.0	35128	2	1	C	F
NOV 8,83	OCT 11,83	1650	800	96256.0	35134	2	1		
DEC 6,83	NOV 8,83	800	820	99637.0	35142	2	1		
JAN 3,84	DEC 6,83	820	1600	86691.0	35150	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 5,83	6.72	3.19	0.453	0.206	0.086	0.033	0.063
MAR 1,83	FEB 1,83	U 1.39	U 0.32	U 0.122	U 0.101	U 0.040	U 0.011	U 0.004
MAR 29,83	MAR 1,83	3.19	2.85	0.316	0.188	< 0.171	< 0.043	0.047
APR 26,83	MAR 29,83	4.27	2.45	0.163	0.099	0.079	0.021	0.034
MAY 25,83	APR 26,83	5.20	2.59	0.282	0.118	0.203	0.049	0.040
JUN 21,83	MAY 25,83	1.64	6.28	0.380	0.164	0.196	0.058	0.068
JUL 19,83	JUN 21,83	3.37	3.95	0.358	0.167	0.388	0.100	0.075
AUG 16,83	JUL 19,83	D 5.02	4.02	0.201	0.190	0.163	0.046	0.047
SEP 13,83	AUG 16,83	5.86	7.19	0.327	0.277	0.183	0.051	0.068
OCT 11,83	SEP 13,83	3.64	1.17	0.311	U 0.506	< 0.078	0.084	<T 0.019
NOV 8,83	OCT 11,83	4.44	2.16	0.462	0.182	0.145	0.027	0.057
DEC 6,83	NOV 8,83	D 14.12	2.13	0.306	0.136	0.065	0.022	0.035
JAN 3,84	DEC 6,83	D 18.85	2.45	0.300	0.196	0.027	0.027	0.046

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL #23 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 5,83	0.156	0.025	0.018	0.031	0.0023	< 0.0006	< 0.00063
MAR 1,83	FEB 1,83	U 0.050	0.023	0.014	U 0.001	0.0022	< 0.0007	< 0.00072
MAR 29,83	MAR 1,83	0.171	0.052	0.029	0.018	0.0022	0.0039	< 0.00085
APR 26,83	MAR 29,83	0.097	0.043	0.015	0.026	0.0020	0.0022	< 0.00055
MAY 25,83	APR 26,83	0.071	0.060	0.034	0.036	0.0031	0.0015	< 0.00051
JUN 21,83	MAY 25,83	0.090	0.067	0.042	0.031	0.0038	0.0014	< 0.00055
JUL 19,83	JUN 21,83	0.072	0.117	0.103	0.030	0.0073	0.0031	0.00034
AUG 16,83	JUL 19,83	0.053	0.047	0.116	0.035	0.0061	0.0033	0.00279
SEP 13,83	AUG 16,83	0.071	0.063	0.043	0.034	0.0065	0.0035	< 0.00059
OCT 11,83	SEP 13,83	U 0.195	U 0.126	0.053	0.047	< 0.0039	D 0.0062	U 0.00623
NOV 8,83	OCT 11,83	0.091	0.062	0.026	0.031	0.0031	0.0031	< 0.00052
DEC 6,83	NOV 8,83	0.128	0.022	0.014	0.013	0.0023	0.0035	0.00080
JAN 3,84	DEC 6,83	0.150	0.014	D 0.003	0.036	0.0015	D 0.0063	< 0.00058

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 5,83	< 0.0013	0.011	0.00021
MAR 1,83	FEB 1,83	< 0.0014	0.009	U 0.00007
MAR 29,83	MAR 1,83	< 0.0017	0.011	0.00031
APR 26,83	MAR 29,83	< 0.0011	0.006	0.00024
MAY 25,83	APR 26,83	< 0.0010	0.008	0.00029
JUN 21,83	MAY 25,83	< 0.0011	0.009	0.00020
JUL 19,83	JUN 21,83	< 0.0010	0.009	0.00029
AUG 16,83	JUL 19,83	< 0.0011	0.008	0.00056
SEP 13,83	AUG 16,83	< 0.0012	0.012	0.00021
OCT 11,83	SEP 13,83	U 0.0078	< 0.008	0.00062
NOV 8,83	OCT 11,83	< 0.0010	0.010	0.00062
DEC 6,83	NOV 8,83	< 0.0010	0.007	0.00050
JAN 3,84	DEC 6,83	< 0.0012	0.010	0.00138

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL #22 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	1600	1120	60120.0	35073	2	1		
MAR 1,83	FEB 1,83	1120	745	58580.0	35081	2	1		
MAR 29,83	MAR 1,83	745	730	82330.0	35087	2	1		
APR 25,83	MAR 29,83	740	2000	76280.0	35093	2	1		
MAY 24,83	APR 26,83	745	1900	90510.0	35099	2	1		
JUN 22,83	MAY 24,83	1900	830	88510.0	35105	2	1		
JUL 19,83	JUN 22,83	830	830	76480.0	35111	2	1		
AUG 18,83	JUL 19,83	830	820	88070.0	35117	2	1		Z
SEP 13,83	AUG 18,83	820	1130	74993.0	35123	2	1		Z
OCT 11,83	SEP 13,83	1130	1530	21077.0	35129	2	1	C	F
NOV 8,83	OCT 11,83	1530	1615	76933.0	35135	2	1		
DEC 6,83	NOV 8,83	1615	745	82190.0	35143	2	1		
JAN 4,84	DEC 6,83	745	1420	84635.0	35151	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	3.11	3.74	0.395	0.291	0.107	0.039	U 0.562
MAR 1,83	FEB 1,83	6.95	4.35	0.560	0.248	0.119	0.035	0.094
MAR 29,83	MAR 1,83	4.70	2.39	0.216	0.170	< 0.122	< 0.030	0.043
APR 25,83	MAR 29,83	4.77	2.26	0.092	0.085	0.059	0.039	0.038
MAY 24,83	APR 26,83	3.72	2.45	0.116	0.138	0.186	D 0.138	0.047
JUN 22,83	MAY 24,83	1.69	4.65	0.251	0.226	0.269	D 0.351	0.094
JUL 19,83	JUN 22,83	1.79	3.30	0.186	D 0.346	0.370	D 0.303	0.090
AUG 18,83	JUL 19,83	1.74	4.31	0.128	0.216	0.113	0.036	D 0.081
SEP 13,83	AUG 18,83	2.79	******	******	******	0.189	0.083	0.113
OCT 11,83	SEP 13,83	1.59	2.14	0.071	0.332	0.202	0.076	0.059
NOV 8,83	OCT 11,83	1.91	1.30	0.188	0.091	0.164	0.025	0.049
DEC 6,83	NOV 8,83	2.48	1.82	0.170	0.158	0.077	0.033	0.036
JAN 4,84	DEC 6,83	8.20	2.30	0.284	0.201	< 0.012	0.003	0.047

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL #22 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.241	0.030	< 0.004	0.039	0.0013	0.0013	< 0.00083
MAR 1,83	FEB 1,83	0.261	D 0.157	0.025	0.096	0.0005	0.0014	0.00085
MAR 29,83	MAR 1,83	0.170	0.151	0.088	0.025	0.0043	0.0034	< 0.00061
APR 25,83	MAR 29,83	0.109	0.130	0.044	0.030	0.0026	0.0017	< 0.00066
MAY 24,83	APR 26,83	D 0.095	D 0.372	D 0.181	0.052	D 0.0111	0.0014	0.00088
JUN 22,83	MAY 24,83	0.094	0.633	D 0.535	0.032	D 0.0198	0.0020	0.00147
JUL 19,83	JUN 22,83	D 0.110	D 0.634	0.420	0.029	D 0.0190	0.0059	< 0.00065
AUG 18,83	JUL 19,83	0.059	0.066	0.113	0.041	0.0062	0.0034	< 0.00057
SEP 13,83	AUG 18,83	0.117	D 0.205	0.085	0.036	0.0061	0.0027	< 0.00067
OCT 11,83	SEP 13,83	0.131	0.202	D 0.108	0.040	D 0.0095	< 0.0024	U 0.00617
NOV 8,83	OCT 11,83	0.071	D 0.163	0.052	0.040	0.0052	< 0.0006	< 0.00065
DEC 6,83	NOV 8,83	0.122	0.043	0.028	0.041	D 0.0043	0.0043	0.00097
JAN 4,84	DEC 6,83	0.186	0.021	0.007	0.035	D 0.0033	0.0030	< 0.00059

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	0.0025	0.009	0.00012
MAR 1,83	FEB 1,83	< 0.0017	0.038	0.00020
MAR 29,83	MAR 1,83	< 0.0012	0.021	0.00055
APR 25,83	MAR 29,83	< 0.0013	0.015	0.00068
MAY 24,83	APR 26,83	< 0.0011	0.013	D 0.00069
JUN 22,83	MAY 24,83	0.0023	0.010	0.00032
JUL 19,83	JUN 22,83	< 0.0013	0.012	0.00016
AUG 18,83	JUL 19,83	< 0.0011	D 0.010	0.00032
SEP 13,83	AUG 18,83	< 0.0013	0.009	0.00031
OCT 11,83	SEP 13,83	U 0.0095	0.017	0.00038
NOV 8,83	OCT 11,83	< 0.0013	0.009	0.00036
DEC 6,83	NOV 8,83	< 0.0012	0.009	0.00043
JAN 4,84	DEC 6,83	< 0.0012	0.020	0.00130

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL #21 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	800	800	80380.0	35075	2	1		
MAR 1,83	FEB 1,83	800	800	73900.0	35079	2	1		
MAR 29,83	MAR 1,83	800	800	81210.0	35089	2	1		
APR 26,83	MAR 29,83	800	800	80540.0	35091	2	1		
MAY 24,83	APR 26,83	800	800	94000.0	35097	2	1		
JUN 21,83	MAY 24,83	800	800	96480.0	35103	2	1		
JUL 19,83	JUN 21,83	800	800	89990.0	35109	2	1		
AUG 16,83	JUL 19,83	800	800	81345.0	35115	2	1		
SEP 13,83	AUG 16,83	800	800	83345.0	35121	2	1		
OCT 11,83	SEP 13,83	800	1500	30896.0	35127	2	1	B	F
NOV 8,83	OCT 12,83	830	830	78538.0	35133	2	1		
DEC 9,83	NOV 8,83	830	810	90173.0	35140	2	1		Z
JAN 3,84	DEC 9,83	810	1330	82113.0	35148	2	1	B	Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	3.52	2.86	0.444	U 0.635	0.103	0.032	0.050
MAR 1,83	FEB 1,83	8.48	3.79	0.632	0.284	0.160	0.031	0.068
MAR 29,83	MAR 1,83	3.98	2.67	0.262	0.160	D 0.347	< 0.031	0.034
APR 26,83	MAR 29,83	2.89	2.36	0.165	0.056	0.062	0.019	0.025
MAY 24,83	APR 26,83	3.98	2.77	0.271	0.112	0.215	0.048	0.057
JUN 21,83	MAY 24,83	4.74	5.70	0.389	0.130	0.201	0.050	0.053
JUL 19,83	JUN 21,83	2.30	3.98	0.317	0.183	0.309	0.073	0.064
AUG 16,83	JUL 19,83	2.37	3.66	0.203	0.197	0.172	0.033	0.048
SEP 13,83	AUG 16,83	6.72	6.78	0.288	0.432	0.182	0.050	0.087
OCT 11,83	SEP 13,83	2.48	2.10	0.227	0.259	0.066	0.019	0.040
NOV 8,83	OCT 12,83	3.78	1.65	0.385	0.134	0.155	0.027	0.048
DEC 9,83	NOV 8,83	4.40	2.42	0.316	0.211	0.103	0.023	0.036
JAN 3,84	DEC 9,83	9.10	2.38	0.402	0.445	< 0.012	0.020	0.030

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL #21 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	U 0.613	0.036	0.016	0.034	0.0012	0.0010	0.00062
MAR 1,83	FEB 1,83	0.257	0.044	0.016	0.063	0.0007	0.0031	< 0.00068
MAR 29,83	MAR 1,83	0.160	0.143	0.031	0.021	0.0016	0.0028	< 0.00062
APR 26,83	MAR 29,83	0.096	0.037	0.013	0.032	0.0016	0.0010	< 0.00062
MAY 24,83	APR 26,83	0.073	0.078	0.060	0.045	0.0032	0.0021	< 0.00053
JUN 21,83	MAY 24,83	0.053	0.061	0.034	0.020	0.0034	0.0026	< 0.00052
JUL 19,83	JUN 21,83	0.068	0.137	0.077	0.035	0.0056	0.0017	< 0.00056
AUG 16,83	JUL 19,83	0.044	0.038	0.082	0.057	0.0037	0.0025	< 0.00061
SEP 13,83	AUG 16,83	0.096	0.064	0.042	0.038	0.0072	0.0016	< 0.00060
OCT 11,83	SEP 13,83	0.113	0.053	0.033	0.023	0.0042	0.0026	U 0.00421
NOV 8,83	OCT 12,83	0.099	0.041	0.023	0.034	0.0023	< 0.0006	< 0.00064
DEC 9,83	NOV 8,83	0.177	0.022	0.011	0.033	0.0020	0.0017	< 0.00055
JAN 3,84	DEC 9,83	0.317	0.019	0.007	0.022	0.0016	0.0016	< 0.00061

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0012	0.008	0.00037
MAR 1,83	FEB 1,83	< 0.0014	0.037	0.00016
MAR 29,83	MAR 1,83	< 0.0012	0.018	0.00039
APR 26,83	MAR 29,83	< 0.0012	0.009	0.00040
MAY 24,83	APR 26,83	< 0.0011	0.007	0.00023
JUN 21,83	MAY 24,83	< 0.0010	0.008	0.00029
JUL 19,83	JUN 21,83	< 0.0011	0.010	0.00020
AUG 16,83	JUL 19,83	< 0.0012	0.009	0.00034
SEP 13,83	AUG 16,83	< 0.0012	0.013	D 0.00076
OCT 11,83	SEP 13,83	U 0.0097	0.005	0.00032
NOV 8,83	OCT 12,83	< 0.0013	0.012	0.00023
DEC 9,83	NOV 8,83	< 0.0011	0.012	0.00028
JAN 3,84	DEC 9,83	< 0.0012	0.007	0.00049

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/LO-VOL #27 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 6,83	1000	800	88750.0	35076	2	1		
MAR 1,83	FEB 1,83	800	1245	95720.0	35083	2	1		
MAR 29,83	MAR 1,83	1245	900	60120.0	35085	2	1		
APR 26,83	MAR 29,83	900	900	89190.0	35095	2	1		
MAY 30,83	APR 26,83	900	1500	108302.0	35101	2	1		Z
JUN 21,83	MAY 30,83	1500	1500	78830.0	35107	2	1		Z
JUL 19,83	JUN 21,83	1500	1405	74920.0	35113	2	1		
AUG 16,83	JUL 19,83	1405	945	64830.0	35119	2	1		
SEP 13,83	AUG 16,83	945	1800	76820.0	35125	2	1		
OCT 13,83	SEP 13,83	1800	1345	88560.0	35131	2	1		Z
NOV 8,83	OCT 13,83	1345	1440	77760.0	35137	2	1		Z
DEC 6,83	NOV 8,83	1440	1500	85070.0	35145	2	1		
JAN 4,84	DEC 6,83	1500	1526	63630.0	35153	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 6,83	1.61	1.67	0.144	0.180	0.066	0.043	0.037
MAR 1,83	FEB 1,83	3.21	1.93	0.133	0.110	0.058	0.027	0.029
MAR 29,83	MAR 1,83	1.66	2.00	0.096	0.150	< 0.166	< 0.042	0.025
APR 26,83	MAR 29,83	0.94	1.55	0.081	0.123	D 0.158	0.050	0.024
MAY 30,83	APR 26,83	0.92	1.66	0.074	0.115	0.388	0.090	0.118
JUN 21,83	MAY 30,83	1.61	2.73	0.101	0.095	0.459	0.103	0.031
JUL 19,83	JUN 21,83	0.49	1.90	0.110	0.113	0.497	0.117	0.043
AUG 16,83	JUL 19,83	1.18	2.28	0.096	0.154	D 0.773	D 0.167	0.047
SEP 13,83	AUG 16,83	0.85	1.89	0.046	******	D 0.495	0.105	0.036
OCT 13,83	SEP 13,83	1.69	2.82	0.107	0.113	0.158	0.038	0.062
NOV 8,83	OCT 13,83	3.26	1.29	0.113	0.225	0.176	D 0.041	0.039
DEC 6,83	NOV 8,83	2.04	1.12	0.068	0.312	0.186	D 0.062	0.026
JAN 4,84	DEC 6,83	3.88	******	******	******	< 0.016	0.046	0.024

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/LO-VOL #27

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 6,83	0.169	0.033	0.013	0.014	0.0011	0.0009	< 0.00056
MAR 1,83	FEB 1,83	0.125	0.024	0.013	0.020	0.0005	0.0024	< 0.00052
MAR 29,83	MAR 1,83	D 0.191	0.040	0.023	0.015	0.0022	0.0038	< 0.00083
APR 26,83	MAR 29,83	0.114	0.060	0.029	0.019	0.0022	0.0015	< 0.00056
MAY 30,83	APR 26,83	0.060	0.078	0.042	0.019	0.0032	0.0009	< 0.00046
JUN 21,83	MAY 30,83	0.063	0.084	0.047	0.021	0.0036	< 0.0006	0.00165
JUL 19,83	JUN 21,83	0.072	0.110	0.082	0.015	0.0047	0.0017	< 0.00067
AUG 16,83	JUL 19,83	0.047	0.079	U 0.520	0.013	0.0069	0.0031	< 0.00077
SEP 13,83	AUG 16,83	0.049	0.077	0.063	0.018	0.0046	0.0013	< 0.00065
OCT 13,83	SEP 13,83	0.079	0.035	0.023	0.010	0.0028	0.0015	< 0.00056
NOV 8,83	OCT 13,83	0.139	0.038	0.025	0.021	0.0017	0.0010	0.00193
DEC 6,83	NOV 8,83	0.206	0.059	0.029	0.009	0.0015	0.0015	< 0.00059
JAN 4,84	DEC 6,83	0.244	0.013	0.007	0.015	0.0013	0.0020	< 0.00079

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 6,83	< 0.0011	0.004	< 0.00017
MAR 1,83	FEB 1,83	< 0.0010	0.015	0.00033
MAR 29,83	MAR 1,83	0.0017	0.013	0.00033
APR 26,83	MAR 29,83	< 0.0011	0.005	0.00020
MAY 30,83	APR 26,83	< 0.0009	0.004	0.00011
JUN 21,83	MAY 30,83	< 0.0013	0.004	0.00010
JUL 19,83	JUN 21,83	< 0.0013	0.003	0.00011
AUG 16,83	JUL 19,83	< 0.0015	0.008	0.00077
SEP 13,83	AUG 16,83	< 0.0013	0.006	0.00036
OCT 13,83	SEP 13,83	< 0.0011	0.009	0.00014
NOV 8,83	OCT 13,83	< 0.0013	0.006	0.00028
DEC 6,83	NOV 8,83	< 0.0012	0.005	0.00024
JAN 4,84	DEC 6,83	< 0.0016	0.006	0.00071

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TURKEY LAKE/CUMULATIVE/LO-VOL #37

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
DEC 6,83	NOV 8,83	1100	1200	78246.0	35139	2	1		
JAN 4,84	DEC 6,83	1200	1100	78376.0	35147	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
DEC 6,83	NOV 8,83	1.79	1.15	0.144	0.102	0.031	0.019	0.022
JAN 4,84	DEC 6,83	3.57	1.40	0.207	0.128	< 0.013	0.019	0.013

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TURKEY LAKE/CUMULATIVE/LO-VOL #37 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
DEC 6,83	NOV 8,83	0.080	0.026	0.013	0.005	0.0017	0.0010	< 0.00064
JAN 4,84	DEC 6,83	0.109	0.013	0.008	0.008	0.0017	0.0010	< 0.00064

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
DEC 6,83	NOV 8,83	< 0.0013	0.003	0.00010
JAN 4,84	DEC 6,83	< 0.0013	0.004	0.00023

PART VII

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORIN/CUMULATIVE/LO-VOL #31 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	930	900	83440.0	34015	2	1		
MAR 1,83	FEB 1,83	900	900	80900.0	34016	2	1		
MAR 29,83	MAR 1,83	900	900	75510.0	34017	2	1		
APR 26,83	MAR 29,83	900	900	80120.0	34018	2	1		
MAY 24,83	APR 26,83	900	930	79230.0	34119	2	1		
JUN 21,83	MAY 24,83	1040	900	76630.0	34320	2	1		
JUL 19,83	JUN 21,83	900	915	69340.0	34321	2	1		
AUG 16,83	JUL 19,83	915	900	77380.0	34322	2	1		
SEP 13,83	AUG 16,83	900	900	75787.0	34022	2	1		
OCT 11,83	SEP 13,83	900	900	77235.0	34023	2	1	B	
NOV 8,83	OCT 11,83	900	900	75194.0	34024	2	1	D	
DEC 6,83	NOV 8,83	900	900	64903.0	34025	2	1	A	
JAN 3,84	DEC 6,83	900	1030	78598.0	34026	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	1.16	1.44	0.111	0.114	0.054	0.026	0.024
MAR 1,83	FEB 1,83	1.73	2.16	0.167	0.087	< 0.124	< 0.031	0.025
MAR 29,83	MAR 1,83	1.55	2.38	0.142	0.119	< 0.132	< 0.033	<T 0.033
APR 26,83	MAR 29,83	1.21	1.94	0.084	0.056	0.082	0.034	0.032
MAY 24,83	APR 26,83	0.67	U 9.40	0.123	0.114	0.265	0.114	0.045
JUN 21,83	MAY 24,83	0.61	2.35	0.088	0.052	0.172	0.067	0.037
JUL 19,83	JUN 21,83	0.29	0.83	0.065	0.065	0.110	0.046	0.030
AUG 16,83	JUL 19,83	0.39	0.65	0.058	0.052	0.066	0.040	0.032
SEP 13,83	AUG 16,83	<W 0.04	0.53	0.059	0.106	D 0.083	0.048	0.030
OCT 11,83	SEP 13,83	<W 0.04	1.16	0.036	0.078	0.065	0.031	0.023
NOV 8,83	OCT 11,83	D 0.18	1.13	0.113	<W 0.007	0.192	0.047	0.050
DEC 6,83	NOV 8,83	0.41	0.85	0.058	0.108	< 0.015	0.018	0.023
JAN 3,84	DEC 6,83	1.87	******	******	******	0.025	0.019	0.013

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORIN/CUMULATIVE/LO-VOL #31 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3		IRON UG/M**3		ALUMNIUM UG/M**3		LEAD UG/M**3	MANGANSE UG/M**3		COPPER UG/M**3		NICKEL UG/M**3	
FEB 1,83	JAN 4,83	0.123		0.015		0.011		0.013	0.0024		0.0010		< 0.00060	
MAR 1,83	FEB 1,83	0.117		0.116		0.010		0.007	0.0010		< 0.0006		< 0.00062	
MAR 29,83	MAR 1,83	0.162		0.048		0.039		0.008	0.0024		< 0.0007		< 0.00066	
APR 26,83	MAR 29,83	0.095		0.049		0.021		0.008	0.0016		< 0.0006		< 0.00062	
MAY 24,83	APR 26,83	0.083		0.079		0.064		0.011	0.0063		0.0010		< 0.00063	
JUN 21,83	MAY 24,83	0.070	•	0.100		0.072		0.018	0.0039		0.0010		< 0.00065	
JUL 19,83	JUN 21,83	0.040		0.074		0.101		0.015	0.0050		0.0019		< 0.00072	
AUG 16,83	JUL 19,83	0.028		0.023		0.105		0.004	0.0052		< 0.0006		0.00103	
SEP 13,83	AUG 16,83	0.040		0.033		0.045		0.004	0.0026		< 0.0007		< 0.00066	
OCT 11,83	SEP 13,83	0.052		0.056		0.024		0.010	0.0026		< 0.0006		< 0.00065	
NOV 8,83	OCT 11,83	0.076		0.042		0.036		0.017	0.0033		< 0.0007		< 0.00066	
DEC 6,83	NOV 8,83	0.112		0.015	D	0.020		0.006	< 0.0008		D 0.0035		< 0.00077	
JAN 3,84	DEC 6,83	0.121		0.010		0.007		0.008	0.0010		0.0010		< 0.00064	

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3		CADMIUM UG/M**3	
FEB 1,83	JAN 4,83	0.0012	0.004		< 0.00006	
MAR 1,83	FEB 1,83	< 0.0012	0.004		0.00010	
MAR 29,83	MAR 1,83	< 0.0013	0.005		0.00016	
APR 26,83	MAR 29,83	< 0.0012	0.004		0.00010	
MAY 24,83	APR 26,83	< 0.0013	0.006		0.00010	
JUN 21,83	MAY 24,83	< 0.0013	D 0.016		D 0.00023	
JUL 19,83	JUN 21,83	< 0.0014	< 0.001		< 0.00007	
AUG 16,83	JUL 19,83	< 0.0013	0.002		< 0.00006	
SEP 13,83	AUG 16,83	< 0.0013	< 0.001		< 0.00007	
OCT 11,83	SEP 13,83	< 0.0013	0.003		< 0.00006	
NOV 8,83	OCT 11,83	< 0.0013	0.005		0.00011	
DEC 6,83	NOV 8,83	< 0.0015	0.003		< 0.00008	
JAN 3,84	DEC 6,83	< 0.0013	0.003		0.00015	

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL #35 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	900	900	41030.0	34216	2	1	B	
MAR 1,83	FEB 1,83	900	900	62850.0	34217	2	1		
MAR 29,83	MAR 1,83	900	900	88270.0	34117	2	1	B	
APR 26,83	MAR 29,83	930	900	88650.0	34219	2	1		
MAY 24,83	APR 26,83	900	900	81460.0	34220	2	1		
JUN 21,83	MAY 24,83	900	900	74270.0	34221	2	1		
JUL 19,83	JUN 21,83	900	900	77120.0	34222	2	1		
AUG 16,83	JUL 19,83	900	900	70780.0	34223	2	1		
SEP 13,83	AUG 16,83	900	900	75003.0	34224	2	1	BQ	
OCT 11,83	SEP 13,83	900	900	81058.0	34225	2	1	B	
NOV 8,83	OCT 11,83	900	900	88829.0	34226	2	1		
DEC 6,83	NOV 8,83	900	1040	90618.0	34227	2	1		
JAN 4,84	DEC 6,83	1040	900	88716.0	34228	2	1		

REMOVAL DATE	EXPOSURE DATE		SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83		0.81	1.95	0.232	0.219	0.094	0.034	0.030
MAR 1,83	FEB 1,83		1.22	2.07	0.159	0.207	< 0.159	< 0.040	0.024
MAR 29,83	MAR 1,83		1.62	1.98	0.091	0.119	< 0.113	< 0.028	0.034
APR 26,83	MAR 29,83		0.68	2.12	0.079	0.164	0.107	0.055	0.036
MAY 24,83	APR 26,83		0.41	1.38	0.049	0.104	0.128	0.044	0.024
JUN 21,83	MAY 24,83		0.36	1.75	0.077	0.094	0.130	0.042	0.032
JUL 19,83	JUN 21,83		0.35	1.30	0.107	0.091	0.148	0.054	0.069
AUG 16,83	JUL 19,83		0.38	0.28	0.085	0.099	0.106	0.047	0.041
SEP 13,83	AUG 16,83	D	0.09	1.17	0.133	0.160	0.341	0.093	0.120
OCT 11,83	SEP 13,83	<W	0.04	******	******	******	0.069	0.023	0.025
NOV 8,83	OCT 11,83	<W	0.04	0.96	0.121	<W 0.006	0.113	0.024	0.039
DEC 6,83	NOV 8,83		0.44	0.83	0.052	0.105	< 0.011	0.016	0.011
JAN 4,84	DEC 6,83		1.32	******	******	******	0.022	0.024	0.028

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL #35 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.183	0.027	0.023	0.015	0.0024	< 0.0012	< 0.00122
MAR 1,83	FEB 1,83	D 0.215	0.049	0.030	0.010	0.0021	< 0.0008	0.00207
MAR 29,83	MAR 1,83	0.161	0.099	0.020	0.012	0.0020	< 0.0006	< 0.00057
APR 26,83	MAR 29,83	0.122	0.106	0.059	0.015	0.0028	< 0.0006	U 0.00542
MAY 24,83	APR 26,83	0.052	0.060	0.036	0.010	0.0028	0.0016	< 0.00061
JUN 21,83	MAY 24,83	0.073	0.164	0.075	0.032	0.0034	0.0018	< 0.00067
JUL 19,83	JUN 21,83	0.036	0.088	0.210	0.020	0.0058	0.0019	< 0.00065
AUG 16,83	JUL 19,83	0.033	0.061	0.125	0.016	0.0049	0.0011	0.00184
SEP 13,83	AUG 16,83	0.070	0.101	0.068	0.018	U 0.0221	0.0011	< 0.00067
OCT 11,83	SEP 13,83	D 0.043	0.046	0.021	0.018	0.0019	< 0.0006	< 0.00062
NOV 8,83	OCT 11,83	0.062	0.050	0.038	0.015	0.0017	< 0.0006	< 0.00056
DEC 6,83	NOV 8,83	0.102	0.019	0.012	0.005	< 0.0006	< 0.0006	< 0.00055
JAN 4,84	DEC 6,83	0.158	0.015	0.007	0.016	0.0015	0.0009	< 0.00056

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0024	0.009	< 0.00012
MAR 1,83	FEB 1,83	< 0.0016	< 0.002	0.00013
MAR 29,83	MAR 1,83	< 0.0011	0.004	0.00009
APR 26,83	MAR 29,83	< 0.0011	0.006	0.00009
MAY 24,83	APR 26,83	< 0.0012	0.006	0.00010
JUN 21,83	MAY 24,83	< 0.0013	0.005	< 0.00007
JUL 19,83	JUN 21,83	< 0.0013	0.003	0.00013
AUG 16,83	JUL 19,83	< 0.0014	0.002	< 0.00007
SEP 13,83	AUG 16,83	< 0.0013	0.006	< 0.00007
OCT 11,83	SEP 13,83	< 0.0012	0.002	< 0.00006
NOV 8,83	OCT 11,83	< 0.0011	0.002	0.00009
DEC 6,83	NOV 8,83	< 0.0011	0.002	< 0.00006
JAN 4,84	DEC 6,83	< 0.0011	0.003	0.00020

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERALDTON/CUMULATIVE/LO-VOL #30 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
SEP 13,83	AUG 16,83	1900	1000	71576.0	34122	2	1	B	
OCT 11,83	SEP 13,83	1000	915	81516.0	34123	2	1		
NOV 8,83	OCT 11,83	915	900	56151.0	34124	2	1	AC	
DEC 6,83	NOV 8,83	1000	930	88461.0	34125	2	1		
JAN 3,84	DEC 6,83	930	1000	92868.0	34127	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
SEP 13,83	AUG 16,83	<T 0.05	1.22	0.084	0.140	0.352	0.078	0.042
OCT 11,83	SEP 13,83	<T 0.04	1.47	0.058	0.061	D 0.487	0.099	0.025
NOV 8,83	OCT 11,83	<W 0.06	0.85	0.129	<W 0.009	0.223	0.031	<T 0.009
DEC 6,83	NOV 8,83	D 0.79	0.62	0.042	0.153	0.034	0.024	0.020
JAN 3,84	DEC 6,83	1.62	******	******	******	0.041	0.028	0.019

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERALDTON/CUMULATIVE/LO-VOL #30 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
SEP 13,83	AUG 16,83	0.170	0.045	0.037	0.006	0.0042	< 0.0007	< 0.00070
OCT 11,83	SEP 13,83	0.052	0.085	0.016	0.005	0.0016	0.0010	< 0.00061
NOV 8,83	OCT 11,83	0.116	0.030	0.017	0.009	0.0009	< 0.0009	< 0.00089
DEC 6,83	NOV 8,83	0.153	0.012	0.012	0.003	< 0.0006	< 0.0006	< 0.00057
JAN 3,84	DEC 6,83	0.161	0.008	0.003	0.006	0.0009	0.0014	< 0.00054

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
SEP 13,83	AUG 16,83	< 0.0014	0.005	< 0.00007
OCT 11,83	SEP 13,83	< 0.0012	0.013	< 0.00006
NOV 8,83	OCT 11,83	< 0.0018	0.006	< 0.00009
DEC 6,83	NOV 8,83	< 0.0011	0.002	0.00009
JAN 3,84	DEC 6,83	< 0.0011	0.004	0.00019

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/LO-VOL #30A

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 4,83	945	825	73290.0	34115	2	1	B	
MAR 1,83	FEB 1,83	840	824	72240.0	34116	2	1		
MAR 29,83	MAR 1,83	830	830	77400.0	34218	2	1		
APR 26,83	MAR 29,83	1300	820	72330.0	34118	2	1		
MAY 24,83	APR 26,83	835	815	74680.0	34019	2	1		
JUN 21,83	MAY 24,83	815	815	73620.0	34020	2	1		
JUL 19,83	JUN 21,83	830	830	75130.0	34021	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 4,83	1.68	1.84	0.140	0.171	0.072	0.040	0.065
MAR 1,83	FEB 1,83	2.59	2.31	0.121	0.118	< 0.138	D 0.172	D 0.042
MAR 29,83	MAR 1,83	D 0.86	2.20	0.136	D 0.174	< 0.129	< 0.032	0.026
APR 26,83	MAR 29,83	1.80	U 0.41	0.055	0.166	0.055	0.015	0.019
MAY 24,83	APR 26,83	1.03	1.94	0.107	D 0.214	D 0.913	0.188	0.029
JUN 21,83	MAY 24,83	0.95	2.38	0.129	0.156	1.339	0.249	0.054
JUL 19,83	JUN 21,83	0.58	1.44	0.140	0.186	D 1.850	D 0.346	0.069

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/LO-VOL #30A

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 4,83	0.136	0.188	0.034	D 0.047	0.0018	0.0011	< 0.00068
MAR 1,83	FEB 1,83	0.132	0.107	0.016	0.021	0.0025	< 0.0007	< 0.00069
MAR 29,83	MAR 1,83	0.207	0.048	0.042	0.007	0.0017	< 0.0006	< 0.00065
APR 26,83	MAR 29,83	0.059	0.055	< 0.003	0.005	< 0.0007	0.0011	< 0.00069
MAY 24,83	APR 26,83	0.102	0.150	0.047	0.013	0.0054	0.0013	< 0.00067
JUN 21,83	MAY 24,83	0.081	0.283	0.104	0.022	0.0075	0.0014	< 0.00068
JUL 19,83	JUN 21,83	0.064	0.196	0.359	0.019	D 0.0100	0.0027	< 0.00067

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 4,83	< 0.0014	0.005	0.00010
MAR 1,83	FEB 1,83	< 0.0014	0.005	0.00017
MAR 29,83	MAR 1,83	< 0.0013	0.003	0.00010
APR 26,83	MAR 29,83	< 0.0014	0.004	< 0.00007
MAY 24,83	APR 26,83	< 0.0013	0.005	0.00016
JUN 21,83	MAY 24,83	< 0.0014	0.003	< 0.00007
JUL 19,83	JUN 21,83	< 0.0013	0.003	0.00013

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL #36 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 1,83	JAN 10,83	1145	1035	1940.0	34314	2	1	A	FZ
MAR 1,83	FEB 1,83	1100	957	75780.0	34315	2	1		
MAR 29,83	MAR 1,83	1000	940	93080.0	34316	2	1		
APR 26,83	MAR 29,83	940	1140	80790.0	34317	2	1		
MAY 24,83	APR 26,83	1140	1030	79150.0	34318	2	1		
JUN 21,83	MAY 24,83	1030	735	83420.0	34319	2	1		
JUL 19,83	JUN 21,83	735	1025	81900.0	34120	2	1		
AUG 22,83	JUL 19,83	1025	1015	89520.0	34121	2	1		Z
SEP 19,83	AUG 22,83	1015	1045	69768.0	34323	2	1		
OCT 11,83	SEP 19,83	1045	915	57105.0	34324	2	1		Z
NOV 8,83	OCT 11,83	915	900	74187.0	34325	2	1		
DEC 6,83	NOV 8,83	900	730	77733.0	34326	2	1	B	
JAN 3,84	DEC 6,83	730	730	81729.0	34327	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
FEB 1,83	JAN 10,83	U 17.22	U 3.87	U 0.129	U 3.608	U 1.314	U 2.448	U 0.129
MAR 1,83	FEB 1,83	1.94	2.27	0.115	0.086	< 0.132	< 0.033	0.023
MAR 29,83	MAR 1,83	1.69	2.15	0.089	0.129	< 0.107	D 0.090	0.027
APR 26,83	MAR 29,83	1.07	2.13	0.043	0.105	D 0.457	0.092	0.025
MAY 24,83	APR 26,83	0.59	1.33	0.044	0.107	0.298	0.076	0.021
JUN 21,83	MAY 24,83	0.20	1.77	0.057	0.102	0.566	0.155	0.028
JUL 19,83	JUN 21,83	0.16	0.98	0.067	0.061	0.205	0.043	0.038
AUG 22,83	JUL 19,83	0.30	0.78	0.075	0.078	0.293	0.068	0.035
SEP 19,83	AUG 22,83	<T 0.05	0.97	0.093	******	0.411	0.084	0.086
OCT 11,83	SEP 19,83	<W 0.06	******	******	******	0.123	0.029	0.053
NOV 8,83	OCT 11,83	<W 0.05	1.15	0.094	<W 0.007	0.148	0.024	0.040
DEC 6,83	NOV 8,83	0.51	1.03	U 0.360	0.199	0.037	0.033	0.023
JAN 3,84	DEC 6,83	1.84	******	******	******	< 0.012	0.031	0.018

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL #36 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 1,83	JAN 10,83	U 1.933	U 0.732	U 0.129	U 1.144	U 0.0258	U 0.0258	U 0.02577
MAR 1,83	FEB 1,83	0.119	0.026	0.011	0.012	0.0011	< 0.0007	< 0.00066
MAR 29,83	MAR 1,83	0.188	0.075	0.028	0.015	0.0019	D 0.0021	0.01074
APR 26,83	MAR 29,83	0.129	0.079	0.046	0.029	0.0028	0.0016	< 0.00062
MAY 24,83	APR 26,83	0.061	0.088	0.025	0.010	0.0032	0.0032	< 0.00063
JUN 21,83	MAY 24,83	0.064	0.228	0.137	0.015	0.0072	D 0.0054	0.00276
JUL 19,83	JUN 21,83	0.027	0.043	0.067	0.015	0.0055	0.0031	0.00098
AUG 22,83	JUL 19,83	0.032	0.051	0.089	0.016	0.0056	0.0039	0.00145
SEP 19,83	AUG 22,83	0.064	0.052	0.136	0.023	U 0.0123	0.0022	< 0.00072
OCT 11,83	SEP 19,83	0.070	0.043	0.023	0.015	0.0026	< 0.0009	< 0.00088
NOV 8,83	OCT 11,83	0.091	0.042	0.024	0.017	0.0011	< 0.0007	< 0.00067
DEC 6,83	NOV 8,83	0.206	0.021	0.011	0.008	< 0.0006	0.0013	< 0.00064
JAN 3,84	DEC 6,83	0.183	0.008	0.003	0.012	0.0010	0.0010	< 0.00061

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 1,83	JAN 10,83	U 0.0516	U 0.129	U 0.00258
MAR 1,83	FEB 1,83	< 0.0013	0.003	0.00011
MAR 29,83	MAR 1,83	< 0.0011	0.003	0.00009
APR 26,83	MAR 29,83	< 0.0012	0.006	0.00010
MAY 24,83	APR 26,83	< 0.0013	0.006	0.00006
JUN 21,83	MAY 24,83	< 0.0012	0.004	< 0.00006
JUL 19,83	JUN 21,83	< 0.0012	0.002	0.00010
AUG 22,83	JUL 19,83	< 0.0011	0.003	0.00009
SEP 19,83	AUG 22,83	< 0.0014	0.006	< 0.00007
OCT 11,83	SEP 19,83	< 0.0018	< 0.002	< 0.00009
NOV 8,83	OCT 11,83	< 0.0013	0.004	0.00013
DEC 6,83	NOV 8,83	< 0.0013	0.002	0.00019
JAN 3,84	DEC 6,83	< 0.0012	0.004	0.00015

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